JCHR

Journal of Community Health Research 2018; 7(4): 256-264.

Online Volunteering, A Way to Reduce Health Inequalities: A Review Study

Hamed Seddighi [1], Ibrahim Salmani [2*]

1. Department of Social Welfare Management, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran
2. Department of Health in Disaster and Emergency, School of Public Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

ARTICLE INFO

Review Article

Received: 8 Jun 2018
Accepted: 13 Nov 2018

Corresponding Author:
Ibrahim Salmani
salmani@ssu.ac.ir

ABSTRACT

Introduction: Volunteering is a way for community participation and involving local social capital. Volunteering has the potential to enhance well-being and reduce health inequalities. The aim of this study was to evaluate the effects of online volunteering on people's well-being and the reduction of inequalities.

Methods: In this narrative review, using related keywords, 326 studies were found in the initial search in PubMed, Sage, Springer, Google Scholar, Elsevier, PsycINFO and finally 57 studies were selected for review.

Results: The study found that virtual volunteering in organizations is a combination of offline and online volunteering, and fewer volunteers are online volunteers. One of the main features of online volunteering is the maximum use of time, and the reduction of travel time. This type of volunteering can be done 24 hours a day and seven days a week. Online volunteering can involve all people, including young people, the elderly, people with disabilities and disadvantaged groups and minorities. One of the main benefits of this type of volunteering is that many people who cannot attend the organization can participate in this way. Online volunteering also could reduce the discrimination and health inequalities. .

Conclusion: Although online volunteering is developing globally, volunteer-based organizations have not yet adopted their strategies, rules, and procedures for new volunteers. It seems online volunteering will also enable different groups to participate in activities and promote the health of different groups.

Keywords: Online Volunteering, Volunteer Organizations, Online Advocacy, Health Inequality

How to cite this paper:

Seddighi H, Salmani I. Online volunteering, a way to reduce health inequalities: A review study. Journal of Community Health Research. 2018; 7(4): 256-264.

[Downloaded from jhr.ssu.ac.ir on 2026-11-19]

[DOI: 10.18502/jchr.v7i4.273]

Copyright: ©2017 The Author(s); Published by Shahid Sadoughi University of Medical Sciences. This is an open-access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Introduction

Today information technology plays an important role in modern life and as a tool to influence various aspects of human life. In the year 2017, the number of mobile phone users in the world was over 4.77 billion and is predicted to reach five billion people in 2019 [1]. In the year 2016, it was estimated that 62.9 percent of the people in the world have a cell phone. Also, until June of the year 2017, 51 percent of people around the world have accessed to the Internet [2]. In the year 2015, the international communication Union reported that 3.2 billion people or half of the world's people would be online until the end of the year [2]. Oxford dictionary has defined online as "any activity or service provided or available through the use of the Internet or any types of computer network [2]."

There is strong evidence that volunteering and well-being have positive interaction. Participation in voluntary services has positive effects on mental health [3, 4], life satisfaction [5, 6], happiness [7, 8], self-steam [7, 9], functional inability [9, 10] and psychosocial well-being[11]. Voluntary activities in the world are expanding at different levels and with different objectives. With an overview of the voluntary literature, we can find five dimensions in the definitions of the voluntary activity. The first dimension is a free choice, which means that the volunteer participates freely and without compulsion in a particular activity [12, 13]. Some definitions also describe volunteers as someone who has relative freedom and voluntary commitment [14-16]. For example, some people who provide public services instead of military service can be considered volunteer.

The second dimension is about rewarding volunteers. Due to the definitions of volunteer, the volunteer will not receive a bonus. Broader definitions of the volunteer can include rewards, but they should not be expected to receive rewards. The broadest definition of the volunteer is the receipt of the reward for the cost performance [14, 17, 18].

In the third dimension, volunteers are defined according to their work structure. Two different areas are separated. A weaker definition includes only voluntary activity in the formal organizational structure but the broader definition includes some activities such as helping a neighbor, helping friends, etc. [19-24]. The fourth dimension of volunteering is also about the beneficiary of volunteering. A weaker definition accepts only volunteering activities aimed at strangers but also accepts other definitions such as benefits to friends and relatives. In this dimension, and the broadest definition, volunteering services to volunteers themselves are also accepted [20, 23, 25-29] . In the fifth dimension, the physical or virtual presence of the volunteer is discussed. Many studies have only addressed volunteers, while recent studies have considered online or distant volunteering as one of the main types of volunteering [13, 16, 27, 30-37]. With the advent of information and communication technologies, volunteering goes from present and physical to both online and distance. In the traditional form of volunteering, each stage of it was done face to face, but today; the volunteer can choose an organization or take on a specific task and carry it out remotely through digital technology [14, 38-40]. Many leaders believe that the use of information and communication technologies will also increase the efficiency of the management process of volunteers as well as the provision of volunteers such as ICT activists, the youth and travelers [46]. The aim of this study was to finddifferent types of online volunteering, place and time of online volunteering, online volunteers attributes and advantages, disadvantages, opportunities and also the threats of online volunteering.

Methods

This study was conducted using a review method. The word combination of Table 1 was used to search. 326 articles were extracted using databases; PsycINFO, Elsevier, Springer, PubMed, Google Scalar and the combination of the keywords are mentioned. After reviewing the abstracts of the articles and examining their relationship with the research questions, 57 studies were selected. All the search were done in English. To combine the keywords, the same keywords

[Downloaded from jhr.ssu.ac.ir on 2026-11-19]

[DOI: 10.18502/jchr.v7i4.273]

related to "volunteering" and "virtual" with the OR operator were placed in a set, and then two sets were combined with the AND operator. When an article with the above descriptions was found, the title and summary of the article were reviewed to find out if the article was relevant to the main questions. In the case of ambiguity, the full text of the article was also examined to determine if there were any entry criteria.

Table 1. Keywords used in search strategy

OR	Online	Virtual	Micro	Internet	Smart	Cyber
OR	Volunteer	organization	AND Participation	Volunteering	Voluntary	

Results

Different types of online volunteering:

Various terms are used to classify online volunteering. The United Nations defines online volunteering as "volunteering completely or at different stages, by volunteering through the Internet at home, at work, at a university, at an internet cafe or any other places possible" [35, 40]. Also, in defining a virtual voluntary project, the term "virtual volunteer" refers to someone who "works at home or at work through the internet [33].

Volunteers like Internet volunteers and distance volunteers are also said to have recently added a micro-volunteer term to this literature that refers to the use of mobile software and social networks [42]. These concepts represent a variety of online volunteering concepts regarding scope. Lopez [43] has identified four categories of online volunteer participation that are called online advocacy, online assessment, consultancy, online-offline volunteers, and pure online volunteers.

Online advocacy: It is about social issues campaigns that use the Internet to promote policy change. In particular, the online platform has been used as a new tool for promoting political ideas [44]. Some believe that increasing access to online activities (sometimes called "clicktivism") may lead to the emergence of a "digital protest tool" [40]. Online Assessment and Consultancy: While some platforms contribute to nonprofit goals, others only provide room for collaboration. Online portals or associations allow individuals to get help and advice from people who have special expertise.

Online volunteers for offline projects: Offline volunteers may become online volunteers, and this happens when a person can do his job online.

Pure Online Volunteers: It's a full version of volunteering that happens on the Internet. By expanding the recruitment of online volunteers and the allocation of online responsibilities, as in the second and third types of online volunteering, online volunteers are ultimately more responsible than offline [37, 45].

With regard to the online volunteering site, four broad conclusions can be derived from virtual volunteering research [46]. First, the demand for virtual volunteering as a means of finding work among those who are currently capable of volunteering is low. Second, the use of information and communication technology to reach a new source of volunteers looking for a way to participate in civil society is high. Third, most of the voluntary virtual businesses held in voluntary organizations include a mix of online and office work, and fourth, a pure online volunteering, in which people use ICT tools to find and do voluntary work alone, happens rarely. Internet invitations provide a new tool for organizations to recruit volunteers. The quality of work and trust in online volunteers is usually the same or higher than the quality achieved through traditional methods [47]

Online communities and discussion groups are the main online volunteers. Studies have shown that both implicit and explicit volunteers create social capital that is the key to the success of online societies. In a study by the Internet Chess Club, volunteers were identified as the core of the online club, which improved the features of the website software and also provided a critical role among the community's subsets [48].

The concept of time has a different form and

[Downloaded from jhr.ssu.ac.ir on 2026-11-19]

[DOI: 10.18502/jchr.v7i4.273]

meaning in the field of online volunteering. As you can say, the area of the work the volunteers are doing is redefined. As mentioned above, one of the main features that distinguish online volunteers from their face to face counterparts is maximizing time which is considered a valuable asset. Online group volunteering easily provides team members' relationships, thus maximizing the use of limited time for active participants is possible here. Regular meetings require a lot of logistical coordination because both parties must be physically present at one time and one place, while Internet messages can be sent by email and participants can read and write messages in comfortable conditions [31]. Also, volunteering on the Internet is an interesting and alternative way for the people who have limited time but want to help others.

An online volunteer from Brazil, translating diverse research on street children in Latin America from Spanish to Portuguese describes his online volunteering effort. He said "Online volunteering opened my eyes to a lot of small donations from a citizen that an ordinary person like myself can do in my spare time." In some cases, it may also be advisable to hold face to face meetings, if possible, or by telephone to help maintain virtual volunteering [49].

Online volunteering eliminates the time spent on traveling and provides timely service to customer. Transfer of knowledge is a field that greatly benefits from the elimination of time and space barriers. Today, online volunteers communicate with trainees or specialists in remote areas via the Internet. An example is CUSO International, which employs virtual volunteers from all over the world to work with other countries such as El Salvador, Guatemala, Honduras, Nigeria, Ethiopia, Cambodia, and Indonesia. Online volunteering provides services 24 hours a day and seven days a week. An example is the Emergency Line to help Sexual Harassment Victims, an innovative model using volunteers to provide critical services through an online telephone line.

Volunteers and users can have better participation using the 24- hours online services, which eliminated the geographical barriers [44]. It is well noted that time is the most valuable asset. For this reason, online volunteering, electronic counseling, and voluntary electronic activities have left the future to busy professionals [17, 31].

Volunteering enables online individuals to work voluntarily wherever they have computers, and for those who have less physical and physiological limitations and personal obligations, more opportunities for voluntary work is provided [33, 47]. While female volunteers are usually active in voluntary organizations [50], the percentage of male volunteers in online volunteering studies, especially among those who have good communication with technology, is significant. For example, in an environment that has an applied computing activity, such as the Malaria Control Center, more than 80% of volunteers work online[51].

Virtual volunteering also varies in age, education, and employment status. Compared to traditional volunteers, virtual volunteers in Canada are usually young, educated and unemployed [47].

Most online volunteers are in their 20s or 30s. They often operate in projects such as virtual voluntary projects [33, 51]. And thus online volunteers are younger than traditional volunteers. Some academics believe older people are usually passive consumers of information technology and avoid the unknown technologies of the Internet [15]. Others regard the physical distance between the volunteer and the venue of volunteering as a major obstacle and are therefore optimistic about the online participation of the elderly [18]. While some volunteers may be involved with online volunteering because of virtual Internet space, many people experience a combination of face to face and online volunteering.

However, the elderly face various barriers regarding online volunteering, such as the complexity of the website, small font size and poor skill [52]. In traditional volunteering, creativeness for volunteering directly relates to the volunteer's experience of friends and family as well as their own previous experience. People whose parents have volunteering experience are

[Downloaded from jhr.ssu.ac.ir on 2026-11-19]

[DOI: 10.18502/jchr.v7i4.273]

more likely to become a volunteer [53]. There is a similar tendency for online volunteering. In a study, many people who volunteered for an online organization had a volunteer in their family or friends [14]. Also, in a study, many elderly volunteers reported to being acquainted with online volunteering through their grandchildren [18]. Online volunteers may be completely new [47].

Online volunteering incentives vary from one area to another, but altruism is one of the main motivations. For focused projects, volunteers are primarily involved for a particular cause and for a desire for solidarity or socialization [51]. Wikipedia volunteer directors and editors mainly work for learning motives, but at the same time, they want to create a wealth of knowledge for the general public. On the other hand, gaining social credibility or gaining credibility in online communities has often been of top motivations [32].

Some research has proposed a distinction between the motivational goals between volunteers in software area and volunteers in the content area. While content is always motivated by philanthropy, software contributors place more emphasis on gaining their reputation and empowerment [54]. When they showed that they were unique in their work, they went through challenging goals to demonstrate their ability better [55]. Therefore, sometimes using the social reward technique, based on uniqueness and challengingly, manages and increases volunteers' activity [56]. Also, people looking for an online job seek online volunteering with the aim of finding an earning job [47].

Discussion

Comparison of online volunteering and face to face to face volunteering

Online volunteers spend more time on volunteering than face to face volunteers, as they may be volunteering through the Internet rather than face to face. The number of online volunteers is also higher than face to face volunteers. On the other hand, online volunteers have less volunteering experience than face to face volunteers. However, factors such as the quality of work and the reliability of online volunteers is at a higher level than face to face volunteers [47]. While altruism is the dominant motivation of all volunteers, this motivation is more powerful in online volunteers since selfish behaviors, including psychological and social motivations are less common among online volunteers [57].

Reasons for wanting to wear a uniform, socializing with celebrities, enjoying travel opportunities and maintaining health and fitness, which may motivate volunteers to work face to face is no longer relevant to virtual volunteers. Online volunteers in-service programs are usually eager to learn and make changes [41]. Therefore, it is emphasized in the literature that approvals for volunteering, such as issuing a certificate after completing tasks and providing feedback to online volunteers, are very important [14, 33]. While a lot of research has been done on the impact of face to face volunteering on volunteers [34, 53, 58], almost none of the effects of online volunteering has been identified.

The lack of social and emotional communication of virtual volunteers with others, including those receiving volunteering services, limits these effects to online volunteers. Similarly, unlike face to face volunteering, the voluntary effect of online services on recipients, non-profit organizations [59], online membership moderator organizations [60], and local community and society [36] has not been studied properly.

Choosing online volunteers is usually done by organizations after receiving requests through the website. Organizations may invite volunteers through their site or other sites. However, it's a common practice to recruit volunteers based on information and qualification of volunteers. Monitoring online volunteers may be done by employees of the organization or by specialized staff in HRM. However, previous studies have shown that organizations that have appointed a person to manage volunteers, including online volunteers, are usually more successful in managing them [33]. However, some voluntary

[Downloaded from jhr.ssu.ac.ir on 2026-11-19]

[DOI: 10.18502/jchr.v7i4.273]

human resource managers are more successful in recruiting online volunteers [47]. However, keeping volunteers is harder than recruiting them, because online tasks are mainly based on just one task. Some organizations have expressed concern about doing their job on existing websites. Organizations often complain that many online volunteers do not respond to emails sent for follow-ups or simply disappear, or respond after posting their programs or performing their duties [38].

Advantages and disadvantages of online volunteering

Online Volunteering has many advantages over face to face volunteering. This approach "allows individuals to do volunteering work through a computer at home or at work, which is not influenced by time constraints, personal priorities, disabilities, or family obligations, which prevent them from volunteering." [33]. The elderly and people with disabilities, those who have been victims of bias in a volunteer environment can now volunteer online. On the other hand, online volunteering has special benefits for nonprofit and voluntary organizations. Performing relatively inexpensive work is known as the primary reason for many organizations to engage in online volunteers [14, 33]. However, there are always costs of employment, training, and supervision.

However, virtual volunteering has also disadvantages. The main problem is the withdrawal of virtual volunteers after the organization spends the time to accept, train, and manage online volunteers [38]. Sometimes an online volunteer wants to get more jobs from the organization. In volunteering for international activities, organizations expect volunteers to spend more time learning and doing their job. These disadvantages of online volunteering are commonplace with the volunteers and are not limited to this type of volunteering [15].

Challenges and Sustainability of Online volunteering

Online volunteering is still a new concept between volunteer oriented organizations and managers, and so there are a lot of things to do about it. It's a question that new and emerging technologies can put people who are not interested in volunteering into an online volunteering process. Research has shown that major volunteers are also active in face to face volunteering [47].

Catherine Ackerman [13], examined the social, demographic, resources, and psychological characteristics of online and face to face volunteers and found that online volunteering can be a way of eliminating inequalities in social participation. And in a society that is increasingly digitizing, it can bring social participation from the physical environment to the virtual environment.

Conclusion

Several general conclusions can be drawn from this study on online volunteering. First, online volunteering promises volunteers to reach a new source to look for a way to participate in citizenship. Second, most of the virtual volunteering activities conducted in volunteering organizations include a combination of online and face to face volunteering. One of the main features of online volunteering is the maximum use of time, and the reduction of travel time as this type of volunteering can be done 24 hours a day and seven days a week. Online volunteering can involve all people, including young people, the elderly, people with disabilities and disadvantaged groups and minorities. One of the main benefits of this type of volunteering is that many people who cannot attend the organization can participate and in this way, volunteer services will be provided, and the racial and ethnic discrimination in this type of volunteering can be reduced. Although online volunteering is developing globally, volunteer-based organizations have not yet adopted their strategies, rules, and procedures for the new volunteers. It seems online volunteering will enable different groups to participate in activities and can also promote the health of different groups.

Acknowledgements

We sincerely thank who cooperated with us in conducting this study. The study was conducted in accordance with the ethical guidelines of the

[Downloaded from jhr.ssu.ac.ir on 2026-11-19]

[DOI: 10.18502/jchr.v7i4.273]

declaration of Helsinki.

Authors declare no conflict of interests.

Conflict of interest

References

1. Gap GG. World economic forum. Cologny/Geneva. 2017.
2. Kemp S. Digital in 2018: world's Internet users pass the 4 billion mark. New York, We Are Social: 2018.
3. McDougle L, Handy F, Konrath S, et al. Health outcomes and volunteering: The moderating role of religiosity. Social Indicators Research. 2014; 117(2): 337-351.
4. Greenfield EA, Marks NF. Formal volunteering as a protective factor for older adults' psychological well-being. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences. 2004; 59(5): S258-S264.
5. Piliavin JA, Siegl E. Health benefits of volunteering in the Wisconsin longitudinal study. Journal of Health and Social Behavior. 2007; 48(4): 450-464.
6. Kim J, Pai M. Volunteering and trajectories of depression. Journal of Aging and Health. 2010; 22(1): 84-105.
7. Borgonovi F. Doing well by doing good. The relationship between formal volunteering and self-reported health and happiness. Social science & medicine. 2008; 66(11): 2321-2334.
8. Musick MA, Wilson J. Volunteering and depression: The role of psychological and social resources in different age groups. Social Science & Medicine. 2003; 56(2): 259-269.
9. Konrath S, Fuhrel-Forbis A, Lou A, et al. Motives for volunteering are associated with mortality risk in older adults. Health Psychology. 2012; 31(1) :87-96.
10. Morrow-Howell N, Hinterlong J, Rozario PA, et al. Effects of volunteering on the well-being of older adults. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences. 2003; 58(3): S137-S145.
11. Thoits PA, Hewitt LN. Volunteer work and well-being. Journal of Health and Social Behavior. 2001; 42(2): 115-131.
12. Kollock P. The economies ol online cooperation. In: Smith MA, Kollock P, editors. Communities in Cyberspace. USA and Canada: Routledge; 1999: 220-236.
13. Ackermann K, Manatschal A. Online volunteering as a means to overcome unequal participation? The profiles of online and offline volunteers compared. New Media & Society. 2018; 20(12): 4453-4472.
14. Cravens J. Involving international online volunteers: Factors for success, organizational benefits, and new views of community. The International Journal of Volunteer Administration. 2006; 24(1): 15-23.
15. Czaja SJ, Lee CC. The impact of aging on access to technology. Universal Access in the Information Society. 2007; 5(4): 341.
16. Surowiecki J. The wisdom of crowds. New York: Knopf Doubleday Publishing Group; 2005.
17. Ensher EA, Heun C, Blanchard A. Online mentoring and computer-mediated communication: New directions in research. Journal of Vocational Behavior. 2003; 63(2): 264-288.
18. Mukherjee D. Participation of older adults in virtual volunteering: A qualitative analysis. Ageing International. 2011; 36(2): 253-266.
19. Handy F, Cnaan RA, Brudney JL, et al. Public perception of" who is a volunteer": An examination of the net-cost approach from a cross-cultural perspective. Voluntas: International Journal of Voluntary and Nonprofit Organizations. 2000; 11(1): 45-65.
20. Kimmel J, Connelly R. Mothers' time choices caregiving, leisure, home production, and paid work. Journal of Human Resources. 2007; 42(3): 643-681.
21. Mook L, Handy F, Ginieniewicz J, et al. The value of volunteering for a nonprofit membership association: The case of ARNOVA. Nonprofit and Voluntary Sector Quarterly. 2007; 36(3): 504-520.
22. Pho YH. The value of volunteer labor and the factors influencing participation: Evidence for the United States from 2002 through 2005. Review of Income and Wealth. 2008; 54(2): 220-236.
23. Rochester C, Paine AE, Howlett S, et al. Volunteering and society in the 21st century. United Kingdom: Palgrave Macmillan; 2016.
24. Seddighi H. Voluntary work monetary value and cost-benefit analysis with'value audit and voluntary investment'technique: case study of Yazd red crescent society youth members voluntary work in health and safety

[Downloaded from jhr.ssu.ac.ir on 2026-11-19]

[DOI: 10.18502/jchr.v7i4.273]

plan for new year's passengers. Quarterly Scientific Journal of Rescue and Relief. 2016; 8(1-2): 144-159. [Persian]
25. Cnaan RA, Handy F, Wadsworth M. Defining who is a volunteer: Conceptual and empirical considerations. Nonprofit and Voluntary Sector Quarterly. 1996; 25(3): 364-383.
26. Foster V, Mourato S, Pearce D, et al. The price of virtue: The economic value of the charitable sector. Cheltenham: Edward Elgar Publishing; 2001.
27. Hustinx L, Cnaan RA, Handy F. Navigating theories of volunteering: A hybrid map for a complex phenomenon. Journal for the Theory of Social Behaviour. 2010; 40(4): 410-434.
28. Seddighi H, Morovati Sharifabadi A. Efficiency evaluation of road relief bases of Yazd province red crescent society in new year plan. Journal of Rescue & Relief. 2013; 5(3): 18-26.
29. Vaillancourt F. To volunteer or not: Canada, 1987. Canadian Journal of Economics. 1994; 27(4): 813-826.
30. Bowman W. The economic value of volunteers to nonprofit organizations. Nonprofit Management and Leadership. 2009; 19(4): 491-506.
31. Amichai-Hamburger Y. Potential and promise of online volunteering. Computers in Human Behavior. 2008; 24(2): 544-562.
32. Baytiyeh H, Pfaffman J. Volunteers in wikipedia: why the community matters. Journal of Educational Technology & Society. 2010; 13(2): 128-140.
33. Cravens J. Virtual volunteering: Online volunteers providing assistance to human service agencies. Journal of Technology in Human Services. 2000; 17(2-3): 119-136.
34. Rheingold H. The virtual community: Homesteading on the electronic frontier. 1st ed. Cambridge, Massachusetts: MIT press; 2000.
35. Robert L, David HS, Cornelia G, et al. State of the world's volunteerism report: universal values for global well-being. Bonn, Germany : United Nations Volunteers; 2011.
36. Smith DH. The global historical and contemporary impacts of voluntary membership associations on human societies. Brill Publisher; 2018: 1-125.
37. Vézina M, Crompton S. Volunteering in Canada. Ottawa,ON,Canada: Statistics Canada; 2012.
38. Baruch A, May A, Yu D. The motivations, enablers and barriers for voluntary participation in an online crowdsourcing platform. Computers in Human Behavior. 2016; 64: 923-931.
39. Bussell H, Forbes D. Understanding the volunteer market: The what, where, who and why of volunteering. International Journal of Nonprofit and Voluntary Sector Marketing. 2002; 7(3): 244-257.
40. Earl J, Kimport K. Digitally enabled social change: Activism in the internet age. Cambridge, Massachusetts: The Mit Press; 2011.
41. Cox J, Oh EY, Simmons B, et al. Doing good online: An investigation into the characteristics and motivations of digital volunteers. SSRN Working Paper; 2016.
42. Paylor J. Micro-volunteering: Doing some good through smartphones? Research Bulletin; 2012.
43. Peña-López I. Online volunteers: knowledge managers in nonprofits. The Journal of Information Technology in Social Change. 2007; 1(1): 143-159.
44. Liu HK. Exploring online engagement in public policy consultation: the crowd or the few?. Australian Journal of Public Administration. 2017; 76(1): 33-47.
45. Murray V, Harrison Y. The Impact of Information and communications technology on volunteer management. Toronto, Ontario: Canadian Centre for Philanthropy; 2002.
46. Liu HK, Harrison YD, Lai JJ, et al. Online and virtual volunteering. In: Smith DH, Stebbins RA, Grotz J, editors. The Palgrave handbook of volunteering, civic participation, and nonprofit associations. London: Palgrave Macmillan; 2016. P: 290-310
47. Murray V, Harrison Y. Virtual volunteering: current status and future prospects. Toronto, Ontario: Canadian Centre for Philanthropy; 2002.
48. Ginsburg M, Weisband S. Social capital and volunteerism in virtual communities: The case of the internet chess club. Proceedings of the 35th Annual Hawaii International Conference on System Sciences (HICSS'02); 2002 Jan 7 - 10 : Washington, DC: USA; 2002:171b
49. Mackay SA, White KM, Obst PL. Sign and share: what influences our participation in online microvolunteering. Cyberpsychology, Behavior, and Social Networking. 2016; 19(4): 257-263.

[Downloaded from jhr.ssu.ac.ir on 2026-11-19]

[DOI: 10.18502/jchr.v7i4.273]

50. Wymer Jr WW. Youth development volunteers: Their motives, how they differ from other volunteers and correlates of involvement intensity. International Journal of Nonprofit and Voluntary Sector Marketing. 1998; 3(4): 321-336.
51. Krebs V. Motivations of cybervolunteers in an applied distributed computing environment: MalariaControl. net as an example. First Monday. 2010; 15(2).
52. Ibarra F, Korovina O, Baez M, et al. Tools enabling online contributions by older adults. IEEE Internet Computing. 2016; 20(5): 58-65.
53. Rohs FR, Shure RS. The identification of those most likely to volunteer: Characteristics of male volunteers in the Big Brothers / Big Sisters program. [Doctorate Thesis]. USA: University of Illinois Chicago in Wymer; 1998.
54. Oreg S, Nov O. Exploring motivations for contributing to open source initiatives: The roles of contribution context and personal values. Computers in Human Behavior. 2008; 24(5): 2055-2073.
55. Ludford PJ, Cosley D, Frankowski D, et al. Think different: Increasing online community participation using uniqueness and group dissimilarity. Conference on Human Factors in Computing Systems - Proceedings, CHI 2004, Vienna: Austria; 2004.
56. Hoisl B, Aigner W, Miksch S. Social rewarding in wiki systems–motivating the community. Proceedings of the 2nd international conference on Online communities and social computing; 2007 Jul 22 - 27; Beijing, China; USA: Springer-Verlag Berlin, Heidelberg; 2007.
57. Nov O, Arazy O, Anderson D. Scientists@ Home: what drives the quantity and quality of online citizen science participation?. PloS One. 2014; 9(4): e90375.
58. Ridings C, Wasko M. Online discussion group sustainability: Investigating the interplay between structural dynamics and social dynamics over time. Journal of the Association for Information Systems. 2010; 11(2): 95.
59. Smith DH. Voluntary organizations. In: Wright JD, editor. International Encyclopedia of the Social & Behavioral Sciences, 2nd ed: Oxford: Elsevier; 2015: 261-267.
60. Smith DH. Sociological study of nonprofit organizations. In: Farazmand A, editor. Global Encyclopedia of Public Administration, Public Policy, and Governance. New York: Springer; 2017.

[Downloaded from jhr.ssu.ac.ir on 2026-11-19]

[DOI: 10.18502/jchr.v7i4.273]