

Expanding Older Adults' Care Choices Utilizing the Proceeds of Reciprocated Volunteerism: Capitalizing on Ghana's Digitalization Artillery

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Abstract

Ghana has been a collectivistic society. However, due to social change, this value is fast being replaced by individualistic tendencies with implications for age-oriented care provision and receipt. This paper investigates the participation in the socially productive strategy of using ageing-oriented volunteerism to leverage the receipt of care in later life utilizing a quantitative dataset. The results show that volunteering may be undertaken with old age in sight. This needs to take place under circumstances of good communication skills among others. The accumulated time needs to be recorded in a time bank and redeemed with a time bank card in later life. Two-dimensional leveraging points pertain in this context: first, leveraging volunteerism for short or long-term care in the nearest future; second, technological innovation's facilitation of the same. Volunteerism in this context has the attribute of low levels of depression, with implications for quality of life. These are discussed in the light of the social care pillar of ageing social policy. The paper argues that adopting volunteerism with reciprocation as the ultimate goal constitutes a kickback model for care receipt in later life. It served as a choice of care in later life which is a shock absorber to inadequate formal support infrastructure and individualistic social tendencies in Ghana. It is reminiscent of resistance to the shrinkage of older persons' social integration in their social world.

Keywords

Volunteering, Social Care, Social Roles, Reciprocated Care Receipt, Quality of Life, Technological Innovation

1. Introduction

In any given population, the majority group is constituted by people aged 0 - 59 years with the minority being persons aged 60+. Empirical evidence reveals that the voluntary sector should promote fellowship and provide the minority with the opportunity to contribute on an equal footing with the majority [1]. Sveen *et al.* [2] have defined volunteering as a contribution, given freely, in an organized context without any expectation of a reward or other compensation to benefit individuals or groups outside the context of preexisting relationships (p. 1). According to Wilson [3], volunteering is a voluntary act of an individual or group freely giving time and labour for community service (p. 215). The phenomenon of volunteering may take two main forms, namely formal [2] [4] and informal [4] volunteering. In 2019 and 2020, the UN reported the achievement of a 50-50 gender balance among men and women volunteers [5]. The question however is: do volunteers get the same recognition for the volunteer work they engage in? At the global level, when all other types of volunteering are taken into account, the UNV research shows that the majority of volunteering work is undertaken by women in about 57% of cases. In the case of informal volunteering, 59% of the work is done by women. Volunteering roles can be highly segregated. And more women are likely to volunteer for organization in the fields of social and health especially care work beyond the household. Men on the other hand predominate in political, scientific, engineering and peacebuilding fields [5]. The differences herein may be due to social norms and structural inequalities in society, which require greater systemic changes. Also worth noting is that caregiving dynamics are different across the globe [4] [6].

Volunteering might be a health-promotive arena that can build meaningfulness, generate belongingness, and the capacities developed by participants in terms of skills and knowledge. This process seems to be complex and depends on factors such as the organization and inclusivity and helpfulness of the social environment in the organization [7]. Interestingly, participation in volunteering results in the achievement of a higher level of social integration, finding employment and the desire to overcome social isolation, improve language skills and obtain positive public recognition [8] including the fact that formal volunteering fosters the development of a sense of social inclusion and well-being among volunteers [2].

Volunteer work occupies a middle position when it comes to triad relationship among paid work, family work (or informal unpaid work), and volunteer work (or formal unpaid work). Similar to paid work, volunteer work typically and increasingly occurs in formal organisations. Like family work, volunteer work is unpaid, and often involves tasks that are described as caregiving or emotional labor. With this unique position of volunteer work in mind, we investigated how volunteering by older people facilitates expansion in care choices in the future.

Volunteering is promoted by seven key factors. First, a substantial proportion

of volunteers are retirees [4] [9]. Second, college students are another major source of adult volunteers [4]. Third, marriage has been associated with the higher rate of joining voluntary associations [10] [11]. Married people may volunteer more because the institution of marriage accompanies social expectation, among others, that requires married couples to be active in the community [12]. Fourth, the presence of children is also found to promote parental volunteering [13] [14]. It is reasoned that school socialisation of children into civic activities such as volunteering can also encourage their parents to volunteer.

Fifth, the process of volunteering is gender specific with respect to some of the key employment-related and family-related variables. Taniguchi [4] argues that there is a significant difference in the effect of older adults' care in the sense that the time spent among women in the care of older adults is significantly and negatively associated with volunteering. Women have been observed to spend a great deal of time providing unpaid care to aging family relations [4] [15]. From a gender perspective with a focus on older adult care, Matthews and Campbell [16] found that men are slightly more likely to perform instrumental care tasks, involving driving, shopping, and banking, whereas women are much more likely to perform personal care tasks such as assisting with activities of daily living such as bathing, feeding, toileting, and dressing. Personal care leaves caregivers, little recourse in terms of changing their caregiving schedules to accommodate other activities. Sixth, also, underemployment and unemployment may be significant factors for volunteering [4]. Seventh, generativity is another issue worth considering. It concerns the feelings of being relied on and being a good role model to others and is shown to promote volunteering efforts [14]. Other factors entail better health, higher levels of education including being financially secure, care provision and receipt in later life.

Significantly, volunteering assists both the recipients of its services as well as help the providers or volunteers of such services. Hence, volunteering is a two-edged sword in terms of the benefits [17]. Volunteering improves life satisfaction for people of all ages, while older volunteers reap the most benefit. For instance, volunteering protects older persons against the loss of identity while enhancing feelings of well-being [18]. Those who participate in an activity alongside paid work in older age, such as volunteering, often see an association with better health outcomes than those who are employed only [19] [20]. Volunteering is increasingly linked to better overall mental health [21] [22], greater interpersonal trust [23], and even upward occupational mobility [22]. However, the ability of people to help others in the community is likely to be constrained by family care responsibilities. Women continue to spend more time than men on domestic work, and this may directly result in greater time constraints for them.

Issues in Old Age and Technological Innovation

Issues related to old age encompass health, caregiving, pensions, old age poverty

and volunteering [24]. Adjusting to the changes that accompany old age requires that an individual is flexible and develops new coping skills to adapt to the changes that are common to this time in their lives [25]. One of such skills is using volunteering as a leverage to obtain care some years later in life enshrined in the framework of technological innovation.

According to OECD/Eurostat [26], technological innovation denotes new or remarkably improved products, goods, or services in terms of their technical specifications, components, materials, software, design, including other functional features. Technology in this context refers to the use of the mode of digitalisation. This aims at showing advances in creating an inclusive and resilient [27] care receipt framework for care innovation in Ghana. In other words, a technological innovation is a new or improved product or process whose technological characteristics are significantly different from what existed in the past. Implemented technological product innovations are new products (product innovations) or processes in application (process innovations) that have been brought to the market. Innovation depicts adding extra steps to developing new services and products in the public that fulfill unaddressed needs or solve problems that were not in the past. Technological innovation however focuses on the technological aspects of a product or service. However, it is essential to clarify that innovation is driven by technology and it is about agility. It also involves creating innovation in policies and regulations. Hence, innovation covers many areas, and is significant because it enables [28] the geriatric care sector to transform, and to be sustainable and relevant over the long-term.

There have increasingly been lamentations over what is perceived to be the decline over recent years in civic engagement, including voting, charity giving, and volunteering. Among oft-mentioned culprits of this decline are society's obsession with individualism, women's increasing participation in the labor force, and the rise of divorce and non-traditional family forms such as single parent families [29], which may be linked to each other. Civic engagement can be a privilege and a responsibility. For instance, volunteering becomes a privilege when participants benefit from it in terms of human interaction, personal growth, and life enrichment. Individuals may gain similar benefits by working for pay or looking after family. In this study, we chose to focus on volunteering among older people. It sought to determine whether volunteering by older adults is perceived as a positive space and whether it contributes to the expansion in the care choices of older persons serves as the foundation for this study when meddled with technological innovation or digitilisation. This study explores how formal volunteering may contribute to developing a sense of social inclusion in the care provision and receipt landscape and well-being among older adults in Ghana. It is interesting to note that volunteering is an activity that can contribute to the empowerment of older people in care receipt in later life and well-being. This was what current study sought to investigate.

This study sought to ascertain the extent to which volunteering can expand

older care choices using volunteering as a tool for accessing older adult care including how technology can improve the way volunteers are engaged. It therefore sought to address the following research questions: To what extent can older adult oriented volunteerism be used to leverage care receipt and related choices in later life? How can technology improve the way other volunteers are engaged?

The paper is organised as follows: section one introduces the study, section two presents the theoretical framework, section three outlines the methods used, section four presents study findings, section five discusses the findings and section six concludes the study.

2. Theoretical Framework

Havighurst *et al.* [30] have noted that the psychological and social needs of older adults were no different from that of the middle-aged and that it was neither normal nor natural for older persons to become isolated and withdrawn. Significantly, any person who aged optimally managed to stay and remain active and resist the shrinkage of his/her social world. This implies the maintenance of activities of middle age for as long as practicable and finding substitutes, for those that have to be relinquished such as that substituted for work, for friends, and deceased loved ones.

There is evidence that shows that there is a linkage between volunteering and well-being, which in turn provides support for activity theory of ageing, and which intimates that older adults who remain productive and maintain their social networks have higher levels of life satisfaction compared to those who disengage from active service [30] completely. Stated differently, volunteering in this context constitutes partial or incomplete disengagement from active service. They also have fewer symptoms of anxiety or depression [31] [32] including higher levels of satisfaction in life compared to their non-volunteer counterparts.

3. Methodology

This study used quantitative research method and a cross-sectional design to investigate the notion of the use of volunteering and the propensity of it to shape the expansion of care choices in later life. Use was made of survey data to achieve this aim.

3.1. Site Selection

Accra and Tema situated in the Greater Accra Region of Ghana were chosen as the study sites. These sites by virtue of their occupational diversity, provide richer and more interesting data.

3.2. Survey Structure

The survey structure comprised the survey methodology, sampling of individual units from the population of the Greater Accra Region of Ghana and associated techniques of survey data collection, such as questionnaire and methods for im-

proving the number and accuracy of survey responses. The face-to-face survey method was utilized in the study because of its propensity to produce data of high quality to a large extent, barring item non-response as the general concern of the study was to obtain a high response rate (96%). The sample represents individuals who were able to provide rich and varied insights on the topic under investigation volunteering.

3.3. Sampling Procedure

The sample size was calculated using the following formula: $n = 2(Z_{\alpha} + Z_{1 - \beta})^2 \sigma^2 / \Delta^2$, with a power of 80% and a constant of 1.65 and a $p < 0.05$ [33]. The study adopted the simple random sampling technique in selecting the respondents. The sampling process entailed a random sample of individuals aged 18 - 59 years (250) in the Tema Metropolis and a sample of people aged 60+ (250) from both Accra and Tema Metropolises. The sample was selected from a total population of 4,010,054 of the Greater Accra Region [34] of which Accra and Tema form a part, the sample of 4,010,054 were stratified. First, the researchers stratified the population of 4,010,054 into two (2) strata namely 0 - 59 and 60+ based on shared features. This was done with the use of age as a supplementary information. This depicts the creation of population groups that are based on age. After dividing the population into strata, the researchers drew a random sample from each stratum. Second, these two (2) subsets were pooled together to form a random sample. Third, the researchers controlled for the relative size of each stratum. This guaranteed representativeness of the proportion of the stratum within the sample. The researchers used the stratified sampling technique because the stratum of interest was small in percentage of the population, especially older people's stratum, including ensuring not to miss that stratum by chance. The researchers decided that stratification by age would be sufficient. The purpose of the study was to survey with a questionnaire a representative cross-section of respondents.

The purpose of this sampling technique was to ensure that the results obtained from the sample approximates what will have been obtained from the entire population [35] [36] of 4,010,054 as has been articulated.

Therefore, 500 questionnaires were given out and were returned. The sample is large enough to help address the research questions accurately. The research questions of this study include the following: To what extent can older adult oriented volunteerism be used to leverage care choices and receipt in later life? How can technology improve the way volunteers are engaged? We hypothesize that volunteering positively correlates with expansion in care choices among the elderly.

3.4. Research Instrument

A questionnaire made up of both closed and open-ended questions was the instrument used for the study. The questionnaire that was used in the process of data collection contained two sections. Section 1 was on socio-demographic

characteristics, such as age, sex, including level of education. This section explored issues pertaining to volunteerism among younger and older individuals, with later life in sight, measured with a combination of [37] verbalised scale from “frequently” to “never”; [38] verbalised scale from “strongly agree” to “strongly disagree” including inputs from colleagues and also the study’s research interests. After the initial pool of questions were written, qualified experts reviewed and made suggestions for improvement. To ensure reliability of the instrument, it was pre-tested on a sample of thirty individuals, following the guidelines proposed by [39]. The questionnaire was pilot tested on 30 respondents at which 90% confidence interval was reached in terms of 0.10 for a sample of 30 participants.

Together, these were collectively contextualised to fit this study and the Ghanaian scenario. The survey questionnaire instrument’s reliability was ensured in diverse ways, namely, through facilitation by clear instructions and wording of questions. The questionnaire contained standardised instructions, namely “please tick where appropriate”. Also, trait sources of error were minimised through interviewing respondents at their convenience. The validity of the survey data was attained following Nardi’s [40] guidelines. The validity of the data was obtained by means of face-to-face interviews. The face-to-face interviews were conducted in both the English language and Ghanaian languages, namely Ga, Ewe, and Twi.

3.5. Ethical Consideration

Written informed consent was obtained from each research participant during the process of data collection.

3.6. Data Analysis

The answered questionnaires were cleaned and serialized for easy identification. A data entry template for the quantitative data was developed in Statistical Package for Social Science (SPSS). The survey data were then entered into SPSS version 20 and were analyzed with selected descriptive statistics, namely frequencies, percentages, Pearson Chi-square and Pearson’s Product Moment correlation tests.

4. Results

4.1. Socio-Demographic Characteristics of Respondents

The study population consisted of males (49.9%) and females (50.1%) aged 18+ years (**Table 1**). 58% of the respondents were married. The highest educational level attained by the majority of the respondents (80.3%) was tertiary education, including first and second degrees, and post-graduate diploma. It is worth noting that the reference universe of the sample is significantly restricted to urban, educated people.

Table 1. Respondents' demographics.

| Variables | Characteristics | Percentage (%) |
|--------------------------|--------------------------|----------------|
| Age | 18 - 29 | 10.5 |
| | 30 - 39 | 11.5 |
| | 40 - 49 | 13.5 |
| | 50 - 59 | 14.5 |
| | 60+ | 50.0 |
| Sex | Male | 49.8 |
| | Female | 50.2 |
| Marital status | Married | 30.0 |
| | Divorced | 23.5 |
| | Widowed | 7.5 |
| | Single | 11.0 |
| | Co-habiting | 18.0 |
| Educational level | Primary | 1.03 |
| | JHS/MSLC | 5.6 |
| | SHS/Tech/Com/Secretarial | 6.3 |
| | GCE O' Level | 2.3 |
| | GCE A' Level | 4.5 |
| | Bachelor's degree | 58.2 |
| | Post-graduate diploma | 9.3 |
| | Master's degree | 12.8 |

Source: Field data.

4.2. The Extent to Which Older Adult Oriented Volunteerism Can Be Used to Leverage Care Choices in Later Life

4.2.1. The Act of Volunteerism

Our part of the continent is experiencing an unprecedented increase in the number of elderly population due to social change. For instance, 70% of the people said, older people in Ghana are being accused of witchcraft, others stated that older people in Ghana recently are facing psychological torture due to emotional issues that they experience, 10% said they think there are no good policies to care for older adults (see **Figure 1**). The current study shows that older adults experience countless issues such as witchcraft accusations, psychological torture and the lack of good policies for older persons, which may require (counselling) and other related interventions. These are reminiscent of psychological and social challenges that older people are exposed to and thus aligns with the theoretical arguments of [30].

From the findings, 50% of the respondents have volunteered their services before in different dimensions of life namely in churches, communities, hospitals, education and edu (*i.e.*, education) fairs, trade fairs and a host of others, whereas the others have not. The number of volunteer activities undertaken ranges between one (1) and more than four (4). Further, such volunteering needs to be

self-based, that is individual volunteers have the mandate to determine how to handle this act of volunteering, making it a self-styled kind of volunteerism. Further, 13.7% of the respondents opined that they always volunteered. This implies that the respondents are by and large acquainted with the notion of volunteerism, just that the old age dimension to it is what needs to be taken into consideration (see **Table 2** for details). The results also show that the 35% of older adults who volunteered are actively involved in diverse activities in churches and communities. Moreover, the older persons in this category may be said in the words of [30] to be partially disengaged from active service but not totally. The study observed that low levels of depression were associated with the phenomenon of volunteering, particularly among older volunteers (39.3%) whereas the same is high (58.0%) among the younger folks. This has implications for quality of life, which in the context of this paper is high (34.2%) from the point of view of the older study respondents. This finding confirms Havighurst *et al.*'s (1968) theoretical intimations regarding remaining in active and productive work and that such ensures the amassing of social networks among others.

Table 2. Volunteerism dynamics.

| Variables | Young persons (%) | Older persons (%) | Total |
|--|-------------------|-------------------|-------|
| Volunteered before in life | | | |
| Yes | 15.0 | 35.0 | 50.0 |
| No | 25.0 | 25.0 | 50.0 |
| Number of volunteer activities undertaken | | | |
| 1 | 40.0 | 18.0 | 58.0 |
| 2 | 3.3 | 20.0 | 23.0 |
| 3 | 3.3 | 10.0 | 13.3 |
| 4 | 3.4 | 2.0 | 5.4 |
| More than 4 | | | |
| Frequency of volunteerism | | | |
| Never | 30.0 | 15.0 | 45.0 |
| Sometimes | 10.0 | 25.0 | 35.0 |
| Always | 6.7 | 7.0 | 13.7 |
| Rarely | 2.3 | 3.0 | 5.3 |
| Self-based volunteered | | | |
| Yes | 40.0 | 40.0 | 50.0 |
| No | 10.0 | 10.0 | 50.0 |
| Levels of depression | | | |
| High | 5.0 | 3.1 | 8.1 |
| Moderate | 12.0 | 7.6 | 19.6 |
| Low | 33.0 | 39.3 | 72.3 |
| Quality of life | | | |
| High | 20.0 | 34.2 | 54.2 |
| Moderate | 26.5 | 13.8 | 40.3 |
| Low | 0.5 | 2.0 | 2.5 |

Source: Field data.

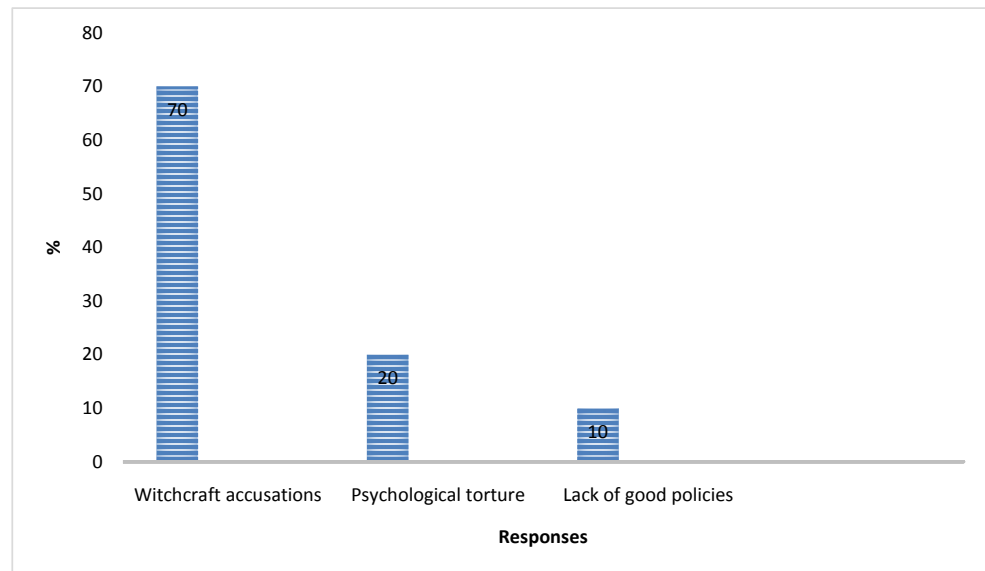


Figure 1. Challenges encountered by older Ghanaian adults. Source: Field data.

4.2.2. Volunteering Modalities

The results also show that due to the increasing nucleation of the family and decline in extended family system, a rewarding self-based volunteering system can be encouraged and pursued to be depended on in the nearest future and/or in later life. 80% of the respondents constituted by both old and young persons, said yes self-based volunteers should be encouraged. The system of modalities of this innovative model by which this volunteering system will operate is premised on the service hours to be deposited in the time account of volunteers. For this, a social welfare time bank, was articulated by respondents (70%) who said in the affirmative that the reason is because it will help volunteers, social workers, and others who work to the nation's expectations and satisfaction. Such a reward-based volunteering model requires that applicants must be healthy, caring, loving, and have good communication skills. This was strongly agreed on by 60% of both old and young respondents, while 20% were neutral about the issue (see **Table 3**). A time card can be generated and used to redeem the accumulated time or made to provide volunteer caregiving. However, 50% of the respondents agreed that the associated time and time interest needs to be verified, when a volunteer is assigned.

As part of the innovative model state institutions such as the Centre for Ageing Studies, the Ministry for Gender, Children and Social Protection may have to liaise with each other to operate the time bank card (TBC) system, taking advantage of the country's digitalization system. Thus, leveraging care in later life facilitated by technological innovation. Volunteers in this context need to be people aged 50+ who have the strength and the passion to do so. This system may be conducive to the plight of older adults who are loners, which will in turn help to curb loneliness as well as social isolation, and who may often obtain care when needed among older generations.

Table 3. Conditions for volunteering.

| Variables | Percent (%) |
|--|-------------|
| Encouragement of self-based volunteerism | |
| Yes | 80 |
| No | 20 |
| Volunteering skills required | |
| Strongly agree | 60 |
| Disagree | 20 |
| Neutral | 20 |
| Verification of time accumulated | |
| Yes | 50 |
| No | 50 |

Source: Field data.

4.2.3. Testing Hypothesis: There Is a Relationship between Volunteering and Expansion in Care Choices among Older Adults

The probable expansion in the choices of care among older persons is compared with volunteering undertaken. The findings of the correlation are significant at the 0.000 level and the value of the correlation is positive but moderately (**Table 4**). The Pearson coefficient value of 0.500 shows that volunteering positively correlates with expansion in care choices among the older persons.

4.3. How Technology Can Improve the Way Volunteers Are Engaged in Ghana

Technology has the ability to facilitate improvement in elderly care services for older persons through the act of volunteerism. This is attainable through the use of a variety of volunteer management tools such as smartphones (20.4%), volunteer management software (6.1%) including check-in-kiosk, computers, emails, online scheduling, QR Code, and web-based hour log (**Figure 2**).

Key among the above stated volunteer management tools is the volunteer management software. The software performs important tasks, by helping volunteer work function more efficiently. The following are its core features: it is a volunteer database that is simple and centralised, it offers easy volunteer hour tracking and reporting, automated volunteer engagement, it is a time-saving communication hub, lastly it fosters the engagement of volunteer profiles (**Figure 3**).

4.4. Summary: Evidence-Based, Integrative and Procedural Volunteering Model

Collectively, these findings yield an evidence-based, integrative and procedural volunteering model with a volunteering-based care system that will automatically gather, create and apply evidence in the getting of care. The proceeds in the form of hours will be deposited in the account of volunteers, to be known as the social welfare time bank (SWTB). The time accumulated can be retrieved with a time bank card. This will then ensure that the valuable time that will be made on the system is documented and therefore recognized. The time bank here referred to is a repository of data for the volunteering model. A summary of this is found in **Figure 4**

below. The significance of this cannot be underestimated. As Meyer *et al.* [41] document “the world’s most valuable resource is no longer oil but data” (p. 1).

Table 4. Correlations.

| | Volunteering | Expansion in care choices among older adults |
|--|--------------|--|
| Volunteering Pearson Correlation | 1 | 0.500** |
| Sig. (2-tailed) | | 0.000 |
| N | | 500 |
| Expansion in care choices among older adults | | |
| Pearson Correlation | 0.500** | 1 |
| Sig. (2-tailed) | 0.000 | |
| N | 500 | |

** . Correlation is significant at the 0.01 level (2-tailed).

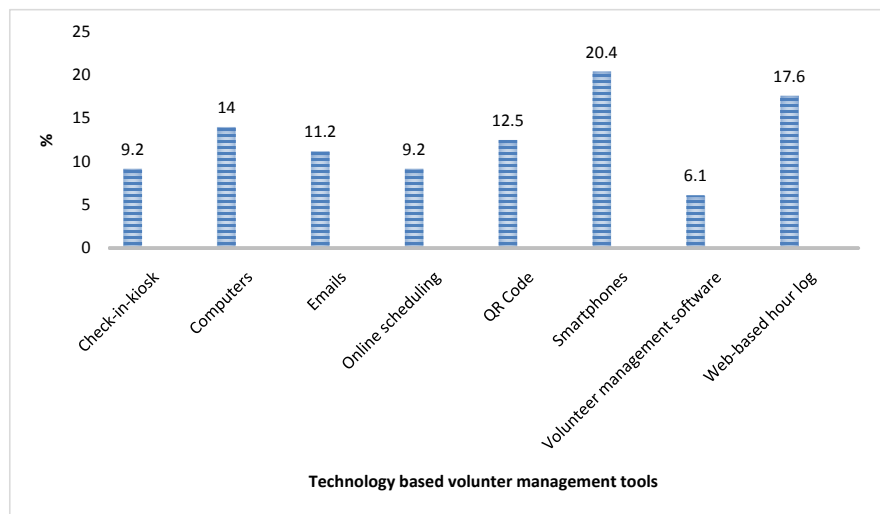


Figure 2. Useful volunteer management tools. Source: Field data.

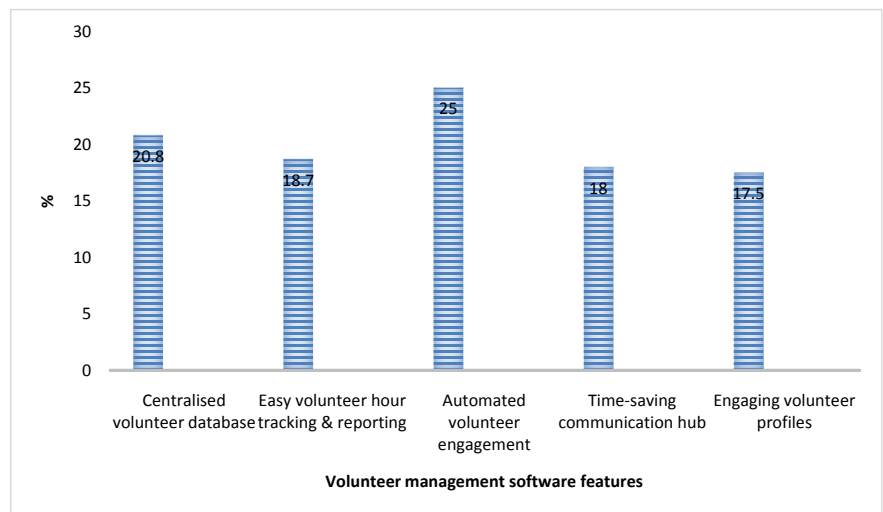


Figure 3. Features of volunteer management software. Source: Field data.

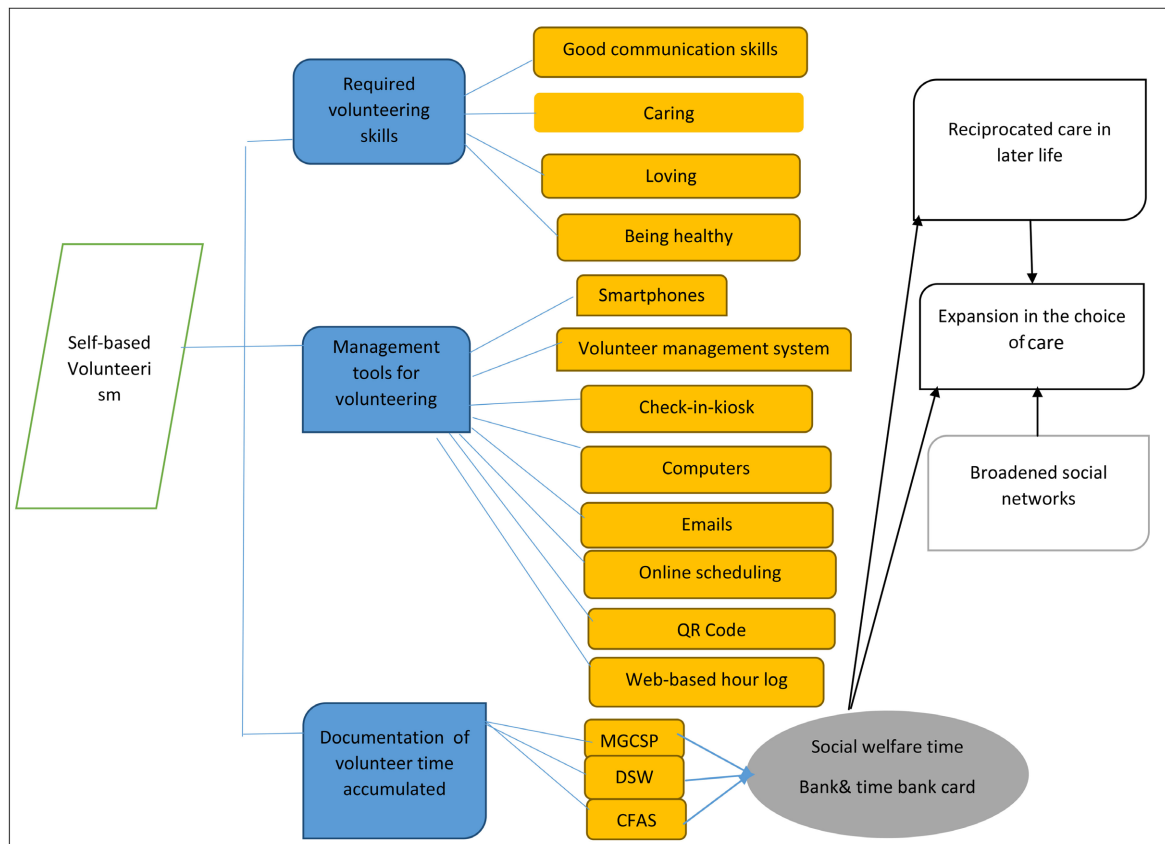


Figure 4. Evidence-based integrative and procedural volunteering model.

This evidence-based, integrative and procedural model for leveraging old age care choices may facilitate as [42] opine the process of care delivery, albeit formally. This whole process entails also a continuously improving system itself through one reform or the other. The success of this will hinge on consistent stakeholder consultations that are crucial for the achievement of stakeholder buy-ins.

5. Discussion

The study set out to investigate the extent to which volunteering and technological innovation shape the expansion in later life care choices for older adults. Problems of aging usually appear after the age of 60 years and beyond. These have been complicated with the lack of formal support infrastructure, increasing nucleation of the family and decline in extended family system. The findings of the current study show that volunteering in old age has become an accepted and widespread activity engaged in by older persons. The results also observed that 50% of the respondents have volunteered before in their life and the highest number of activities engaged in was four (4).

In this current study, those who participated in one or two volunteering activities saw significant improvements in their levels of depression, quality of life and life satisfaction compared to non-volunteers. This finding ties in with re-

search by [43] who found the effects of volunteering to be greatest among persons who had low levels of social interaction. Yet these effects are even greater among those who participated in three (3) or more volunteer activities. Further, participating in three (3) or more volunteer activities is associated with significantly lower social isolation. Volunteering more than once a month is associated with significantly lower levels of depression, higher quality of life and life satisfaction, and volunteering less than a month is associated with less depression and higher quality of life. This suggests that higher frequencies of volunteering are more beneficial than lower frequencies of the same.

People may volunteer based on the sense of normative obligation (“I help because I have to”), the sense of chosen obligation (“I help because I want to”) are likely to play a more important role when it comes to making decisions in relation to volunteering. Inasmuch as most people would experience both types of obligatory feelings, the relative intensity of the two could significantly vary from one person to another [4]. To those who feel strongly obligated to their kin, the idea of helping strangers may not occur easily, and the possibility of volunteering may thus be reduced. In a similar but converse vein, Gallagher [44] argued that older persons may be more active in volunteering partly because of their reduced sense of being obligated to help their family members, and their enhanced sense of doing as they please. But, the number of hours employed is, commonly considered as a constraining factor for volunteering [14].

It is important to note that a rewarding self-based volunteering needs to be encouraged and pursued to be depended on in the nearest future. The requisite volunteering skills entail being healthy, caring, loving and good communication skills. 80% of the respondents articulated that self-based volunteers should be encouraged. Participation in the framework of volunteering in age groups/centers should be encouraged as part of which the service hours will be deposited in the time account of volunteers, albeit social welfare time bank. The reason is that, that will assist in reciprocated care for volunteers. In particular, the reciprocated care dimension of it signifies recognition. Stated differently, the volunteerism model seeks to assist older adults to get better attention and care. Previous studies have documented that participation encourages the recognition [2] [4] [37] [45] [46] of ordinary persons as social actors who exercise agency in cognition and behaviour [45] [46] including appreciation [47] [48]. Sveen *et al.* [2] also observed that volunteering can be used as a means of social integration.

Moreover, volunteering in the context of this study could be seen as a tool that is geared at the enlargement of the choices that older people may have with regard to old age support in an era of inadequate social support infrastructure including weakened extended family support system, utilising digital innovations. Significantly, the Pearson coefficient value of 0.500 is indicative of a positive correlation between volunteering and expansion in care choices among older adults (see **Table 4**). This model of volunteering may depict development in the frontiers of ageing related social care with an individualised orientation. The re-

sults of the current study are reflective of the identification of resources such as volunteering and technological innovation, accessed and used by older persons to promote their well-being. This is synonymous with Antonovsky's [49] concept of the sense of coherence (SOC), which is a concept in salutogenesis. It represents a life orientation and reflects the ability to identify the internal and external resources to which one has access and to use these resources to promote health and well-being [50]. Wood *et al.* [51] argued that this notion of volunteering is reflective of distributive justice and procedural justice. This type of care setting could also be advantageous for care recipients themselves, if they are to maintain varied social interactions [4].

In this current study, it was observed that those who participated in one or two volunteering activities saw significant improvements in their levels of depression, quality of life and life satisfaction compared to non-volunteers. This finding ties in with research by [43] who found the effects of volunteering to be greatest among persons who had low levels of social interaction. Yet these effects are even greater among those who participated in three (3) or more volunteer activities as mentioned earlier. Further, participating in three (3) or more volunteer activities is associated with significantly lower social isolation. Volunteering more than once a month is associated with significantly lower levels of depression, higher quality of life and life satisfaction, and volunteering less than a month is associated with less depression and higher quality of life. This suggests that higher frequencies of volunteering are more beneficial than lower frequencies of the same.

The results of the current study also show that volunteering may be a potential way to improve the experience of older persons in general including retirees due to the maintenance of social networks as well as remaining socially productive and active and to circumvent as [42] have noted inadequate care. Participation in volunteering may be beneficial in improving the retirement circumstances of persons who have lower levels of wealth and who also experience poorer mental well-being. In essence, continuation with roles that provide a sense of importance and social productivity can lead to better well-being than the loss of such roles. This confirms arguments made by [47]. By contrast, the continuation of roles which are not appreciated or meaningful may be detrimental and better health may be achieved among those in this group who stop such activities [24] based on the privileges and perhaps burden that it may carry.

Digitalisation in the context of this current article denotes the intensification of the use of technological innovation in older adult care choices and provision through volunteerism. The current study articulates the leveraging of volunteerism for care choice(s) and its related expansion in later life facilitated by the usage of technology. These serve as two-dimensional leveraging points. Technology can facilitate and improve the way older volunteers are engaged in a myriad of ways. First, the volunteer management software can both simplify and strengthen the volunteer management process. It is designed to unify the tools needed

to carry out the many administrative duties involved in managing volunteers and volunteer programme activities. The volunteer management software has such features as a centralised volunteer database that is simple, easy volunteer hour tracking and reporting, automated volunteer engagement, time-saving communication hub, engaging volunteer profiles. These are made possible by smart-phones [52] [53], tablets, and computers [53].

Second, a centralised database will ensure that volunteer contact information remains secure, volunteer opportunities are easily accessible to volunteers, and data tracking will be live and accurate, aimed at making an impact in the silver care sector and/or economy. This will enable the collection of all the essential volunteer information in a single place. By and large, the volunteer data will encompass contact details, activity logs and hours records, schedules and availability including volunteer preferences. Programme and agency information will capture agency contact details, segmented opportunity or activity listings and participation data. Also, the software displays volunteer opportunities and shifts in a clean, searchable volunteer-facing list(s).

Third, easy volunteer hour tracking and reporting is necessary in this context in order to avoid losing valuable volunteer data that may be caused by poor record-keeping. Significantly, this can be facilitated by an automated tracking system in order to increase data accuracy. Quintessentially, this is attainable with the utilisation of web-based hours log; check-in kiosk (where volunteers can clock in and out of an opportunity through a tablet, computer, or mobile device), QR code (wherein volunteers can scan the QR code with their smartphones for contact-free check-in and time logging); a mobile app with which to send automated notifications to remind volunteers to check-in when they arrive at their scheduled activity stations. Fourth, the time-saving communication hub can make use of email blast, text messaging, and notifications. Lastly, volunteer profiles will assist in keeping every volunteer information in one place once the volunteers self-register with a given agency including residential care homes and nursing care institutions, hospitals, etc. The data in this case particularly includes interests, skills and qualifications. However, Doraiswamy *et al.* [54] implores society to be empathetic towards the ageing population as most of them may not be technologically inclined. This calls for technical orientation for the population concerned.

Further, some achievable strategies for boosting the engagement of volunteers include consistently communicating with volunteers including thanking them on regular basis, provide positive volunteering experiences, reduce barriers to participation (e.g., technological skills) and induce volunteerism.

6. Conclusions

This study has yielded technologically based innovative information that can be useful for the study of the management of older care from the purview of volunteerism. Reciprocated volunteering must be enacted, publicised and encouraged

with the ultimate aim of helping older adults adjust to old age transition and life events, so that they can continue to live empowered, happy and meaningful lives. It should be an evidence-based, integrative and procedural model for leveraging old age care choices. Such a model may facilitate the process of the delivery of care. Within this context, frontline service providers working with older adults will need to be equipped with key competencies to effectively engage, assess, counsel and make appropriate referrals to specialised services for older adults.

With respect to the above findings, the following recommendations have been proffered. First, special attention needs to be paid to ensuring that individuals who suffer disadvantages in terms of wealth and health are able to access relevant opportunities, services, networks as well as resources as readily as those who are in better social positions. Second, policy needs to focus on dealing with those groups of older persons who are at risk of exposure to poorer circumstances, both prior to exiting the workforce and thereafter. Older people are to be considered in every situation they may find themselves. The government must reconsider old age/ageing policies at the national level that foster volunteerism at older ages. Even those in prison should be considered, because they suffer in so many areas, in terms of accommodation and health issues, since in Ghana our older adults' homes are inadequate and are not functioning like those in western countries. Third, the state should establish and increase its own responsibility on advertising the homes for the senior citizens with more supportive measures for their wellbeing. Finally, there is the need to design policies and interventions to facilitate volunteering among older people which could serve as an alternative working avenue at older ages, which is a shortfall in Ghana. Ghanaian policy-makers need to consider how to construct a conducive environment for volunteering among older adults and opportunities for all regardless of gender, income, age and other personal characteristics.

Limitation of the Study

This paper identifies how volunteering can contribute to the older adults' care options. It also contributes to existing knowledge on care provision for older persons, fills the gap and encourages more studies on the expansion in older adults' care choices. However, there are certain limitations of the current study. First, because of its cross-sectional nature, the current study could not clearly identify causal relationships for the patterns of men's and women's volunteering. Hence, in the future, a longitudinal research that assesses the relative significance of these two causal directions could inform policy makers about whether and how women who are underemployed and/or unemployed benefit from volunteering in the processes of entering and reentering the Ghanaian workforce. Second, the current study also has paid little attention to the organizational setting of volunteer work. Taking organizational factors in research into consideration will certainly enrich our understanding of the gendered pattern of volunteering. Third, questions about the time volunteered by respondents and their

time spent on caregiving to family members, relatives, and friends in Ghana need to be addressed. The study did not examine possible differences between men and women in the correlates of volunteering. Similarly, future research in Ghana needs to explore how many hours per month older persons spend doing formal volunteer work at hospitals or nursing homes, schools, political organizations, as well as any other organization.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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