Exploring Resources for Elderly Living in the Community and Use of Electronic Health Record

Sansila Sunwar

Texas Woman's University, Math and Computer Science Department

Dallas, Texas

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Abstract

The purpose of this paper is to recognize the potential resources and solution to elderly living in the community and use of electronic health record (EHR) to improve services. All the articles mainly focus on how to enhance the adoption of health information technology, and the electronic methods or simply a digitalization of the health field for upgrading the health facilities. The proposed approach for the topic of elderly living in the community, and Diabetes is to recognize the potential resources and solution to elderly living in the community and use of electronic health record (EHR) to improve services. Health care facilities utilizing this Health Information technology approach can be expected to increase in the quality of health facilities provided to the patient along with decreasing the cruciality among the old patient.

Key words: Community Living and Electronic Health Records (EHRs)

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Background

The demographic conditions in the entire world are changing at a high pace, and the ageing population is growing at a rate that by 2050, over one in five individuals worldwide will be over 60 years old. Such a trend is posing a serious challenge to health care systems, specifically in the provision of long-term and community-based care for ageing adults with complex sicknesses, including chronic ailments, locational constraints, and cognitive degradation that need consolidated and successful treatment. Nonetheless, a significant portion of healthcare systems are so institutionalised and do not meet the preferences of older people who tend to want to stay in their communities and remain in living status rather than in facilities (Shi et al., 2020). The incorporation of health information technology, and in particular the use of Electronic Health Records (EHRs), can constitute one of the possible opportunities to revolutionise clinical setups over the last 20 years due to their capacity to improve access to data, ensure better coordination of care and evidence-based practice (Shi et al., 2020). Nevertheless, adoption is not homogeneous and fragmented in community-based care settings where most of the small systems have not been able to afford or install an EHR infrastructure, and there is little sharing of data between the providers and community services. This division poses significant impediments to frail patients who usually need attention in various care facilities, including primary care and specialist hospitals, which creates a mismatch between the incorporation of digital health solutions and community resources, emphasising the necessity of conceptually innovative ways of interconnecting the clinical and social care (Shi et al., 2020). Elderly people with chronic

diseases such as diabetes are highly susceptible to a breakdown in the sequence of care in society, especially if there are no proper plans to reach them.

Problem Identification

As mentioned earlier, the world's population is ageing. By 2050, people over the age of 60 are expected to account for 21 per cent of the global population. About half of them will have a disability, making this the largest community of persons with disabilities, and one of the most stigmatized and neglected. While many may not self-identify as persons with disabilities despite experiencing significant difficulties in functioning and participating, the increasing number of older persons poses a significant challenge to States (U.S. Department of Health and Human Services, Administration for Community Living, 2020). Another area of topic is implementation of the Electronic Health Record. In the U.S., the increase in EHR adoption was stimulated by the 2009 stimulus plan's Meaningful Use initiative. Electronically sharing medical information from one facility to another has become more frequent" (Evans, 2016). The purpose of this paper is to recognize the potential resources and solution to elderly living in the community and use of electronic health record (EHR) to improve services.

Elderly Living in the Community

According to the website ohchr.org, "In recent years, there have been significant advocacy efforts calling for action on the human rights of older persons. Various stakeholders have called for more visibility and increased resources to address the dire situation of millions of older women and men around the world (United Nations Human Rights Office of the High Commissioners, 2021).

The number of persons aged 60 and over is increasing at an unprecedented pace, anticipated to rise from its current 740 million to reach 1 billion. While some continue to lead active lives as

part of their community, many others face homelessness, lack of adequate care. The Association for Community Living organization is helping in the efforts to allow elderly regardless of age or disability, to be able to live independently and participate fully Survey after survey, when older adults and people with disabilities are asked where they would prefer to live, they say they want to live in their communities, not in institutions. People also are happier and healthier when they live in community settings" (United Nations Human Rights Office of the High Commissioners, 2021).

Electronic Health Record (EHR)

According to the website epic.com, "Founded in a basement in 1979 with 1½ employees, Epic develops software to help people get well, help people stay well, and help future generations be healthier. More than 250 million patients have a current electronic record in epic" (Evans, 2016). According to NCBI, "A 2004 random sample of healthcare facilities from across the U.S. found that 13% of respondents had an EHR system fully implemented while 10% did not have or did not plan to have an EHR system. The majority of respondents (62%) used a vendor EHR system (Evans, 2016).

Purpose of the Study

The strategic goals of this project are to help investigate how Electronic Health Records (EHRs) and community-based support systems may be used to enhance the healthcare delivery to the older adults residing in the community and living independently to improve their health outcomes.

Research Question: How does the utilization of EHRs improve the coordination of care and the health outcomes of aging populations not involving institutional care?

With this research question, the aim is to review the existing reports related to the application of EHR and their relation to older adult's care to determine promising practices, limitations, and novelties in the domain. The significance of this study is the fact that the aging of populations around the world attracts increased interest in sustainable, person-centered models of healthcare delivery that would accommodate their desire to age and help them cope with health uncertainties. Using the synthesis of evidence presented in the recent studies, the given paper will outline the practices that are promising and unveil gaps in the existing models to improve future healthcare policy and clinical practice may be based on these results and can be used to create additional community care systems allowing enhanced levels of access.

Methodology

Strategy of Literature search

The academic databases tapped to retrieve the literature reviewed in this project were accessed and searched using Medical Subject Headings (MeSH) terms (i.e., community living, elderly care, and electronic health records (EHRs)) in a structured and target search attempt to access the academic databases, specifically, Medline via EBSCOhost. Only peer-reviewed journal articles made between 2015 and 2020 using English were searched, therefore being relevant and up-to-date. The choice of articles was predetermined by their subject of focusing on older individuals, the implementation of EHRs or health technological solutions, and their application to the model of community-based care. Literature that identified the gains and shortcomings of implementing EHR in relation to the provision of elderly care was given first priority. Research integrity, credibility of the sources, and the respect of intellectual property were some of the ethical considerations that were taken into consideration by making it certain that only the properly cited, peer-reviewed sources were used.

Ethical Considerations

Despite the fact that this project does not require primary data gathering involving human beings, the ethical integrity forms the most important component in the research process by ensuring that literature review relied on all the sources collected in well-known peer-reviewed academic databases, which guarantees their credibility and validity of information. The correct citation procedures have been observed, so as to acknowledge the works of original authors to prevent plagiarism and studied in the ethical use of patient data particularly their privacy, consent and data security. This helps avoid collecting wrong information that are opinion based.

Information Assessment and Consolidation

Since the present project belongs to the literature domain, the raw datasets were not collected or processed. Rather, the results of the chosen studies were critically examined in order to determine trends, results, and emerging approaches to the adoption and success of EHRs in elderly care. Limitation to the studies and the populations and contextual variables were identified in determining the generalizability and applicability. When possible, the results were compared by region, by health system, and even by patient population. This qualitative evidence synthesis forms the basis on which the paper will talk about the possible contribution of EHRs in facilitating greater community living among the old people. Data preprocessing and statistical modeling did not need to be done in any software tool since the methodology is based on evidence synthesis and not computation analysis. Data cleaning utilized Approach step/component #3 Analysis from ACL Participants – IBM SPSS (Statistical Package for the Social Sciences) tool. Input survey answer to create a frequency table for different question of the survey (IBM, 2021; PsychData, 2021). Five of the top articles are presented in Table 1.

Findings

All the five articles used were very informative. There are 3 articles that are from England, and two of them are from United States. All the articles mainly focus on how to enhance the adoption of health information technology, and the electronic methods or simply a digitalization of the health field for upgrading the health facilities (Choi et al., 2019; Klompstra et al., 2019; Otones Reyes et al., 2019; Shi et al., 2020; Yuan et al., 2019). All five articles are observational in nature.

Formulation of Innovative Approach for Clinical Problem

The proposed approach for the topic of elderly living in the community, and Diabetes is to recognize the potential resources and solution to elderly living in the community and use of electronic health record (EHR) to improve services.

The specific components of this approach in order of sequence are:

1. Approach step/component #1 Data Analysis of Outpatient Diabetes Data – Conducted the data analysis of outpatient diabetes data using Tableau. A dashboard was created for analysis of top 10 diabetes diagnosis, trend in age and ethnicity (QlikTech International, 2021; Tableau Software, 2021; Texas Homeland Security, 2021) See Appendix A.
2. Approach step/component #2 Trend Analysis for ACL Participants Data – Conducted a trend analysis for ACL participants data using PsychData (PsychData, 2021). See Appendix B.
3. Approach step/component #3 Analysis from ACL Participants – IBM SPSS (Statistical Package for the Social Sciences) tool. Input survey answer to create a

frequency table for different question of the survey (IBM, 2021; PsychData, 2021). See Appendix C.

Outcomes and Associated Evaluation Criteria

Health care facilities utilizing this Health Information technology approach can be expected to increase in the quality of health facilities provided to the patient along with decreasing the cruciality among the old patient. Several specific outcomes relating to the approach were noted. For example: Using the HIT has improved the ambulatory care systems in hospitals and the clinics. Adoption of an EHR certified by the Office of the National Coordinator for Health IT (ONC) increased from 73% to 91% (Shi et al., 2020). However, in 2016, only 38% of clinics reported having all 16 health IT functionalities included in this study. Small health systems lag behind large systems in ambulatory health IT adoption. The relatively low uptake of health IT functionalities important to care improvement suggests substantial opportunities for further improving adoption of ambulatory health IT even among the current EHR users (Shi et al., 2020). Another specific outcome was: Assessing the HrQoL has efficiently helped for the health care of the older people using the multimorbidity. In total, 238 older people with multimorbidity and high health care consumption, living at home were included (mean age 82, 52% female) (Klompstra et al., 2019). A multiple linear regression model including symptom burden, activities of daily living and depression as independent variables explained 64% of the HrQoL (Klompstra et al., 2019).

Table 1

Literature Review Articles

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
A. 1. Joint associations of		6. Population of Xiamen, China, in 2016.	8. Improvement of memory in older people	11. Improved: Comparison between	12. Yes, there is an improved version of the	15. Sample size is 3230

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
smartphone use and gender on multidimensional cognitive health among		7. 3230 older adults aged 60+ years	(male and female) using smartphone. 9. Observation	smartphone uses and memory cognition using Montreal Cognitive	memory of old people using the smart phones and devices. 13. Only 29.96% of older	16. Not available

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
community-dwelling older adults: a cross-sectional study 2. Yuan, Manqiong			10. Level of Evidence - V	Assessment (MoCA) score, and number of the smartphone functions	adults used smartphones, 473 (60.72%) of which were men. Respondents who had a	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
3. 2019 4. England				used (NSFU) score	higher NSFU maintained a better general and sub-domain cognition except for	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					memory and orientation. Although women had lower values compared to men in	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					visuospatial ability (OR (95% CI): 0.46 (0.37-0.57)), they outperformed	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					their male counterparts in memory (OR (95% CI): 1.38 (1.10-1.73)).	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					14. A higher NSFU was positively associated with increased general and	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					partial subdomain cognitive functions. However, gender differences	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					were found in visuospatial ability and memory, which could be alleviated by	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					smartphone use.	
B. 1. Health information technology for		5. Ambulatory clinics adopting Health	7. Improving health care system by increasing	10. Improved: Comparing adoption of electronic	11. Using the HIT has improved the ambulatory	14. Amount of ambulatory

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
ambulatory care in health systems 2. Shi, Yunfeng 3. 2020		Information Technology (HIT) 6. 17,861 ambulatory clinics	the adoption of ambulatory health IT even among electronic health	health records (EHRs), as well as 16 specific functionalities, at the	care systems in hospitals and the clinics. 12. Adoption of an EHR certified by	clinics 17,861 15. Not available

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
4. United States		affiliated with 1711 health systems, using longitudinal data	records (EHRs) users 8. Observation 9. Level of Evidence - V	clinic level and the system level.	the Office of the National Coordinator for Health IT (ONC) increased from 73% to	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
		(2014-2016)			91%. However, in 2016, only 38% of clinics reported having all 16	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					health IT functionalities included in this study. Small health systems lag behind large	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					systems in ambulatory health IT adoption. 13. The relatively low uptake of health IT	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					functionalities important to care improvement suggests substantial opportunities	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					for further improving adoption of ambulatory health IT even among	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					the current EHR users.	
C. 1. Fall-related emergency department		5. Older adults in	7. Reducing fall injuries, chronic	10. Reduced: Correlation among	11. Yes there is a reduced number of the	14. 1840 respondents

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
visits and hospitalizations among community-dwelling older adults: examination		United States. 6. unweighted N = 1840 respondents aged > 60 years	illness, and sensory and memory illness among old people associated	these factors: chronic illnesses, sensory and memory problems,	fall related injuries, and chronic illness, and memory-sensory problems in old patient	aged over 60 years 15. Not available

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
of health problems and injury characteristic 2. Choi, Namkee G.		with fall injuries	with Emergency Department (ED) visits, and hospitalizations.	and injury characteristics that were associated with ED visits and	12. Of older adults who received medical attention for fall injuries, a little more	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
3. 2019 4. England			8. Observation 9. Level of Evidence - V	hospitalizations among older adults who received medical attention	than one-third had an ED visit only and a little less than a fifth had an overnight	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
				for fall injuries	hospital stay. Multivariable analysis showed that lung disease and memory problems	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					were associated with higher risk of ED visit only; hip and head injuries,	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					facial injuries, and broken bones/fractures (from any type of injury) were	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					more likely to result in hospitalization than other injuries. Fall injuries sustained	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					inside the home, falls from loss of balance/dizziness, and living alone were also	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					more likely to result in hospitalization. 13. These healthcare utilization	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					findings indicate the significant toll that fall injuries exact on older adults and	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					healthcare systems.	
D. 1. Factors related to health-relate		5. Health-related Quality of Life	7. To provide the better delivery of	10. Improved: Relationship between	11. Assessing the HrQoL has efficiently helped for the	14. Length of the study,

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
d quality of life in older people with multimorbidity and high health care consumption		(HrQoL) in older people with multimorbidity and high health	suitable health care to older people 8. Observation	symptom burden, activities of daily living, depression and	health care of the older people using the multimorbidity	and the sample population 238 older people.

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
over a two-year period 2. Klompstra, Leonie 3. 2019 4. England		care consumption, living at home 6. 238 older people	9. Level of Evidence - IV	Health-related Quality of Life (HrQoL)	12. In total, 238 older people with multimorbidity and high health care consumption,	15. Not available

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					living at home were included (mean age 82, 52% female). A multiple	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					linear regression model including symptom burden, activities of	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					daily living and depression as independent variables explained	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					64% of the HrQoL 13. In order to facilitate better delivery of appropriate	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					health care to older people with high health care consumption living at home it is	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					important to assess HrQoL, and HrQoL over time.	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
E. 1. Chronic Pain and Frailty in Community-Dwelling		5. Community-dwelling older adults	7. To uplift the condition of community-dwelling older adults	10. Improved than actual: The relationship between	11. Yes the number of community dwelling older adults are reduced	14. Systematic review, multiple

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
Older Adults: A Systematic Review 2. Otones Reyes, Pedro 3. 2019		6. Total of 23 studies	by reducing the chronic pain and frailty 8. Observation 9. Level of Evidence - I	chronic pain and frailty in community -dwelling older adults.	along with decrease in chronic pain and frailty. 12. A total of 23 studies were finally	study types. 15. Not availabl e

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
4. United States					selected for the systematic review. Most of them (n = 14) were cross-section	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					al studies, and there were also longitudinal studies (n = 4), cohort studies (n =	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					3), and randomized controlled trials (n = 2). Most of the studies found an	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					association between chronic pain and frailty in terms of prevalence; approximatel	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					y 45% of frail patients had chronic pain, and prevalence can reach 70%.	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					13. The studies analyzed suggest that chronic pain has a predictive effect for	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					frailty in older adults compared with those reporting no pain. Higher pain intensity,	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					chronic widespread pain, and higher pain interference were also related to	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					frailty status. No specific interventions for managing chronic pain in frail or prefrail older	

1. Title 2. First Author 3. Date 4. Country	5.	6. Patient Population 7. Sample Size	8. Intervention of Interest 9. Design (Experiment, observation, etc.) 10. Level of Evidence (I - VI)	11. Comparison of Interest	12. Outcome of Interes 13. Results of Study 14. Conclusion	15. Strengths 16. Limitations
					adults were found.	

Note: Instructions are for each of the main articles (at least five) in support your proposed evidence-based practice approach, provide as many of these 15 characteristics as possible. Indicate N/A if not available.

Conclusion

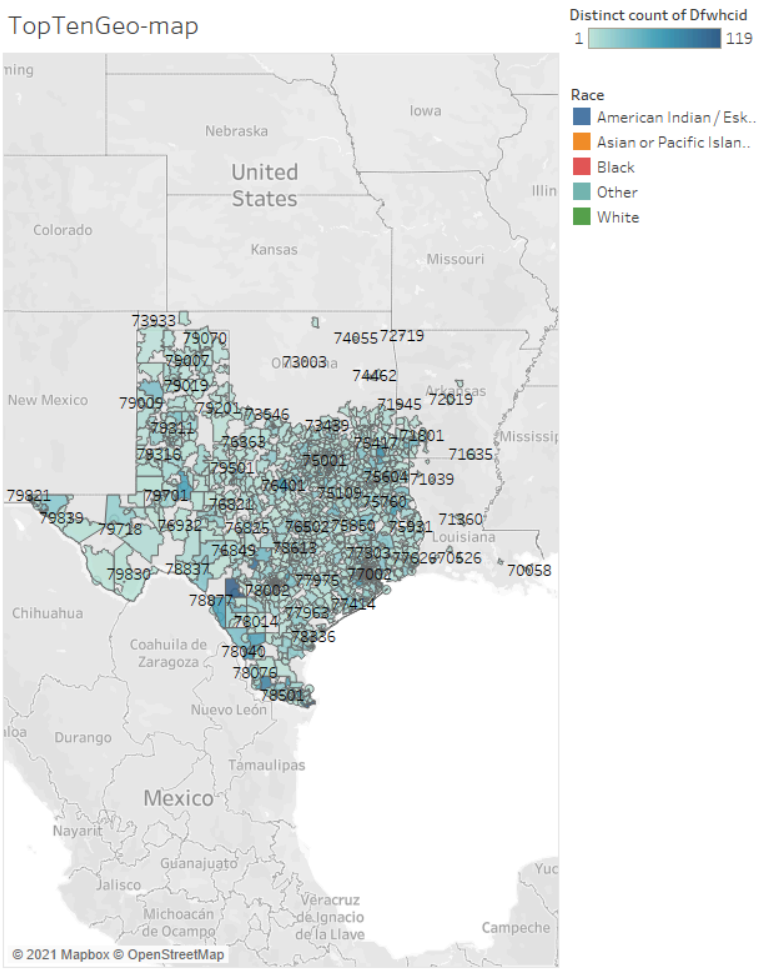
This literature review shows that there is an increasing demand of integrated health solutions that would aid the elderly in community living in line with the available literature which confirms, Electronic Health Records (EHRs) can be of tremendous help in managing care coordination, and monitoring chronic conditions. Most older people want to age in the place and, thus, EHR systems can be important instruments helping to guarantee continuity of care between providers, facilities, and the results imply that properly used, EHR can fill communication gaps among healthcare institutions and community services that are associated with safer and more personal care in older adults. Literature reveals that not everything goes well in existing systems following cost, limited technical expertise, and interoperability which have been identified as delayers to EHR adoption in many of the smaller, or less well-funded, clinics. Also, although numerous studies illustrate successful results of the use of EHR, there is a lack of research providing the long-term effects or addressing the integration models at the community level including non-clinical gaps that allow continuing research and further planning more inclusive and on-scale digital healthcare approaches. Subsequently, future studies are required to understand how it is possible to improve relatively modern systems of EHR to meet the needs of an elderly population in different care areas with initiatives that are necessary to encourage interoperability, funding of smaller facility, and education of healthcare staff. It is important to get an healthcare system that is able to combine the results of ongoing research and further development of health information technology in geriatrics care to optimize the advancement of the system to respond to the diverse and increasing needs of aging populations.

Appendix A: Data Analysis of outpatient Diabetes Data

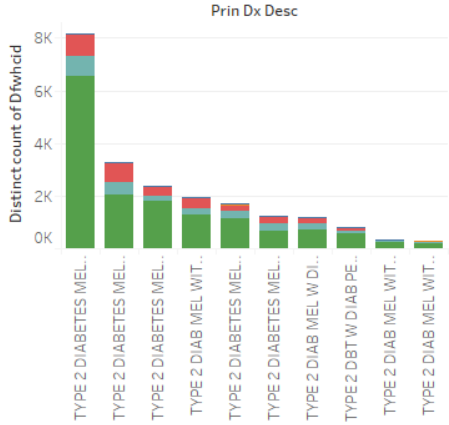
TopTenCount

Prin Dx Desc	
TYPE 2 DIABETES MELLITUS WITH FOOT ULCER	8,180
TYPE 2 DIABETES MELLITUS WITH HYPERGLYCEM..	3,261
TYPE 2 DIABETES MELLITUS WITH OTHER SKIN UL..	2,366
TYPE 2 DIAB MEL WITH HYPOGLYCEMIA WITHOU..	1,951
TYPE 2 DIABETES MELLITUS WITH DIABETIC CATA..	1,692
TYPE 2 DIABETES MELLITUS WITHOUT COMPLICA..	1,224
TYPE 2 DIAB MEL W DIAB CHRONIC KIDNEY DISEA..	1,179
TYPE 2 DBT W DIAB PERIPH ANGIOPATH W/O GA..	785
TYPE 2 DIAB MEL WITH DIABETIC POLYNEUROPA..	338
TYPE 2 DIAB MEL WITH DIABETIC NEUROPATHY U..	304

TopTenGeo-map



TopTenBarChartbyRace



Appendix B: Trend Analysis for ACL Participants Data

OMB Control No. 0985-0036
Exp. Date 11/22/2022

Chronic Disease Self Management

Participant Information Survey

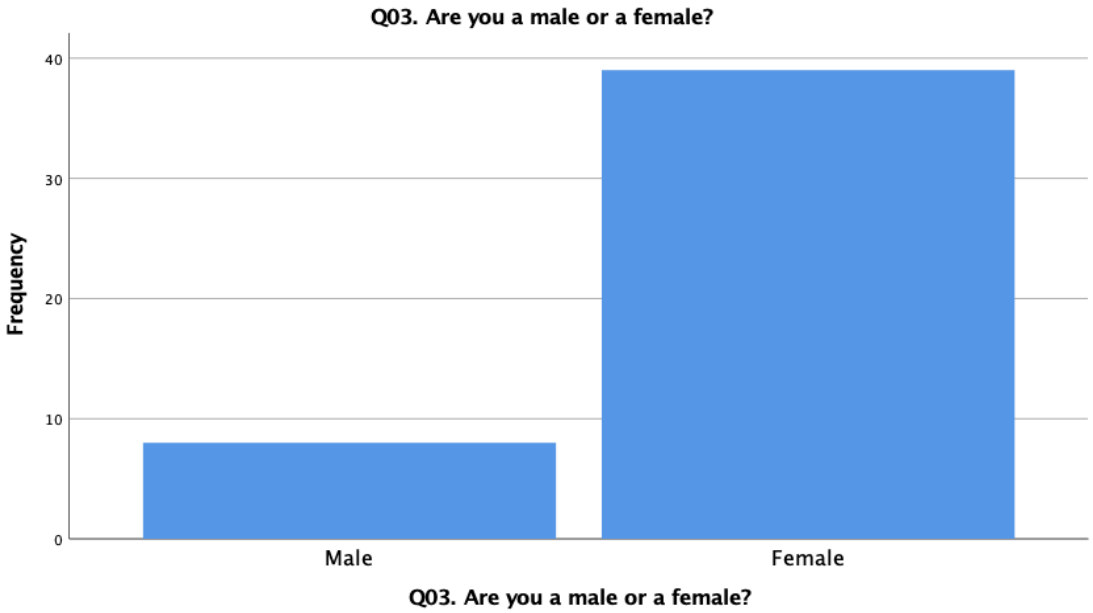
Admin Use Only: ***Participant I.D.:*** The facilitator or program staff should complete this part of the form and mark the sequential number of the participant to the name on the attendance form.
State abbreviation: TX (e.g., NY, VA, etc.)
First four letters of the site name: _ _ _ _
Start date of program: 06/30/20 (e.g., 12/01/19)
Participant number: 01 (e.g., 01, 02, 03, etc.)

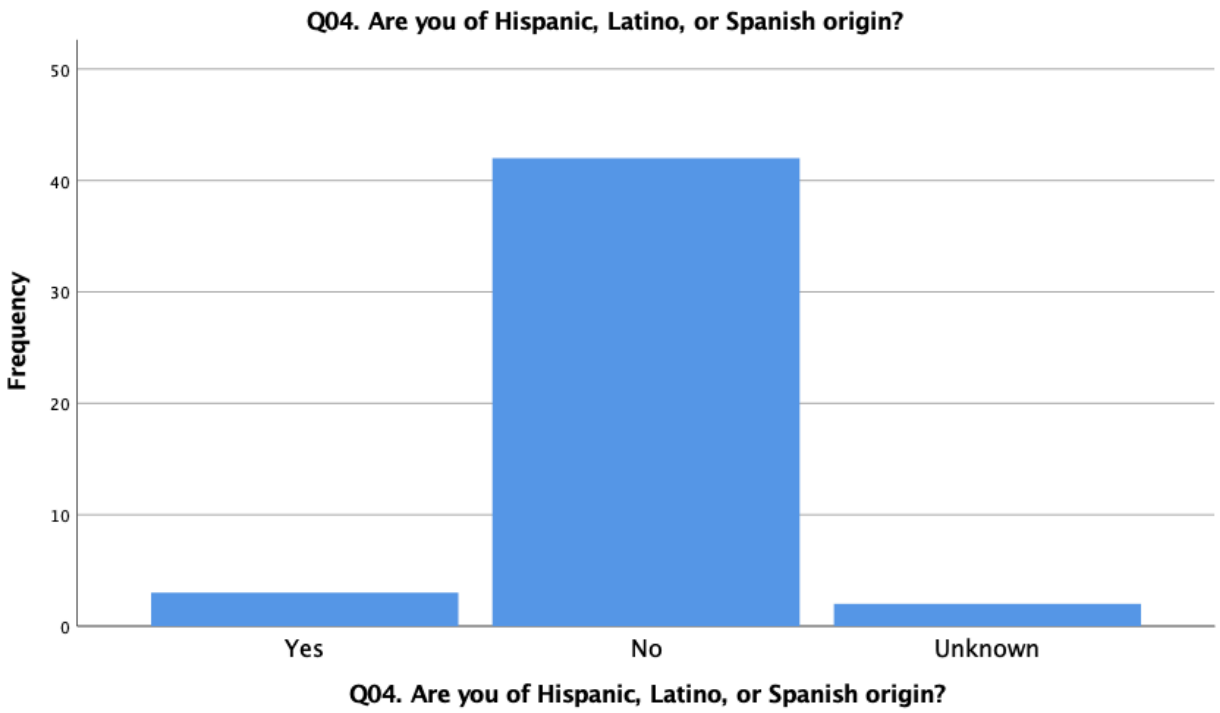
---

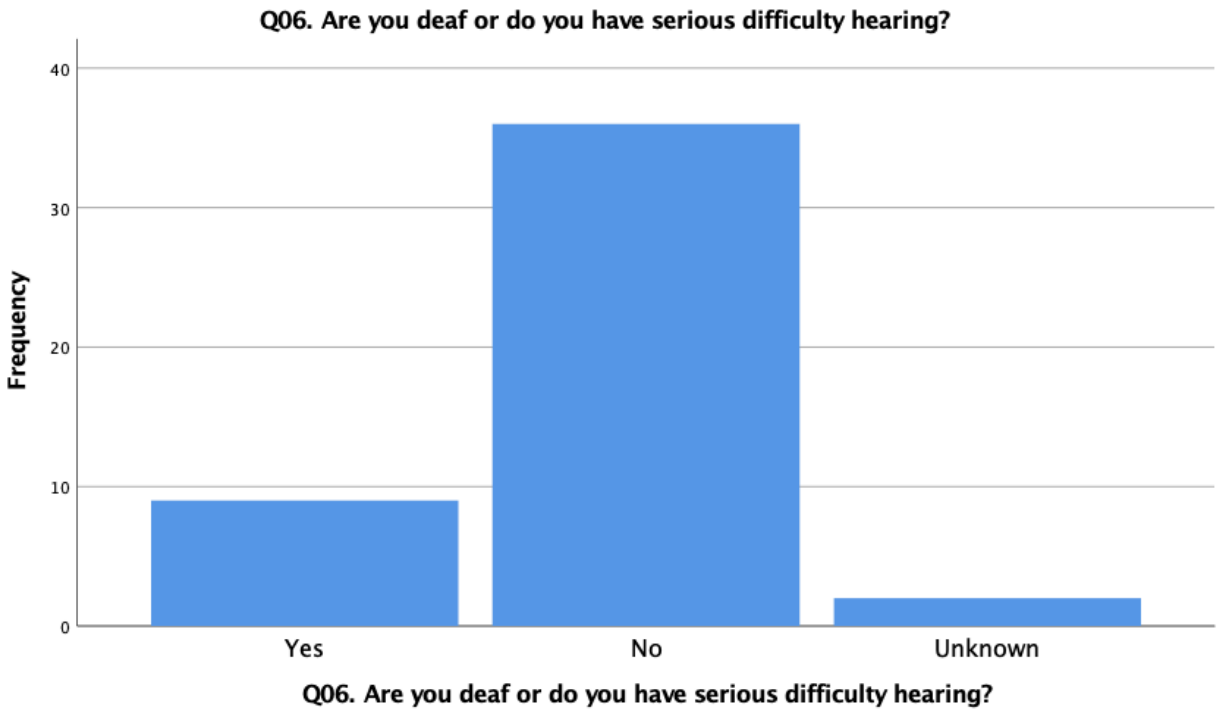
1. Did your doctor or other health care provider suggest that you attend this program?
   O Yes O No
2. How old are you today? 70 years
3. Are you: O Male or O Female?
4. Are you of Hispanic, Latino, or Spanish origin? O Yes O No
5. What is your race? Mark all that apply.
   - O American Indian or Alaska Native
   - O Asian
   - O Black or African American
   - O Native Hawaiian or other Pacific Islander
   - O White
6. Are you deaf or do you have serious difficulty hearing? O Yes O No
7. Are you blind or do you have serious difficulty seeing, even when wearing glasses?
   O Yes O No
8. Do you live alone? O Yes O No
9. What is the highest grade or year of school you completed?
   - O Some elementary, middle, or high school
   - O High school graduate or GED
   - O Some college or technical school
   - O College 4 years or more
10. Have you ever served in the military? O Yes O No

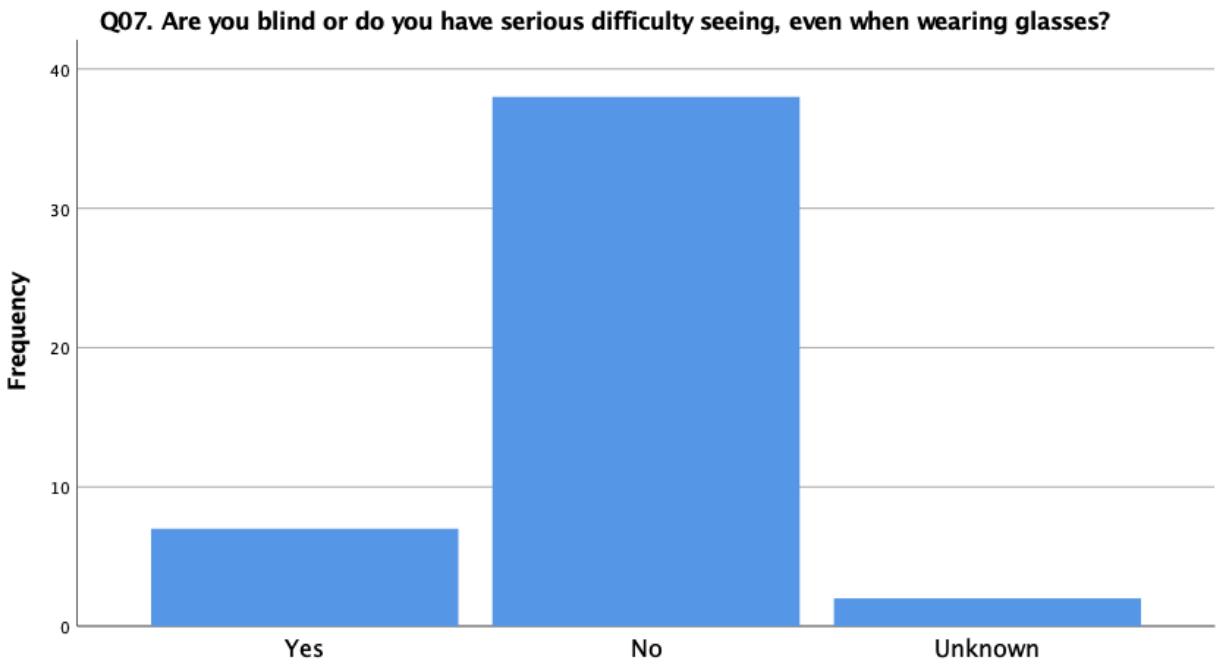
PAPERWORK REDUCTION ACT STATEMENT
According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0985-0036. The time required to complete this information collection is estimated to average 15 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: Administration for Community Living, 330 C Street SW, Washington, D.C. 20201, Attention: PRA Reports Clearance Officer.

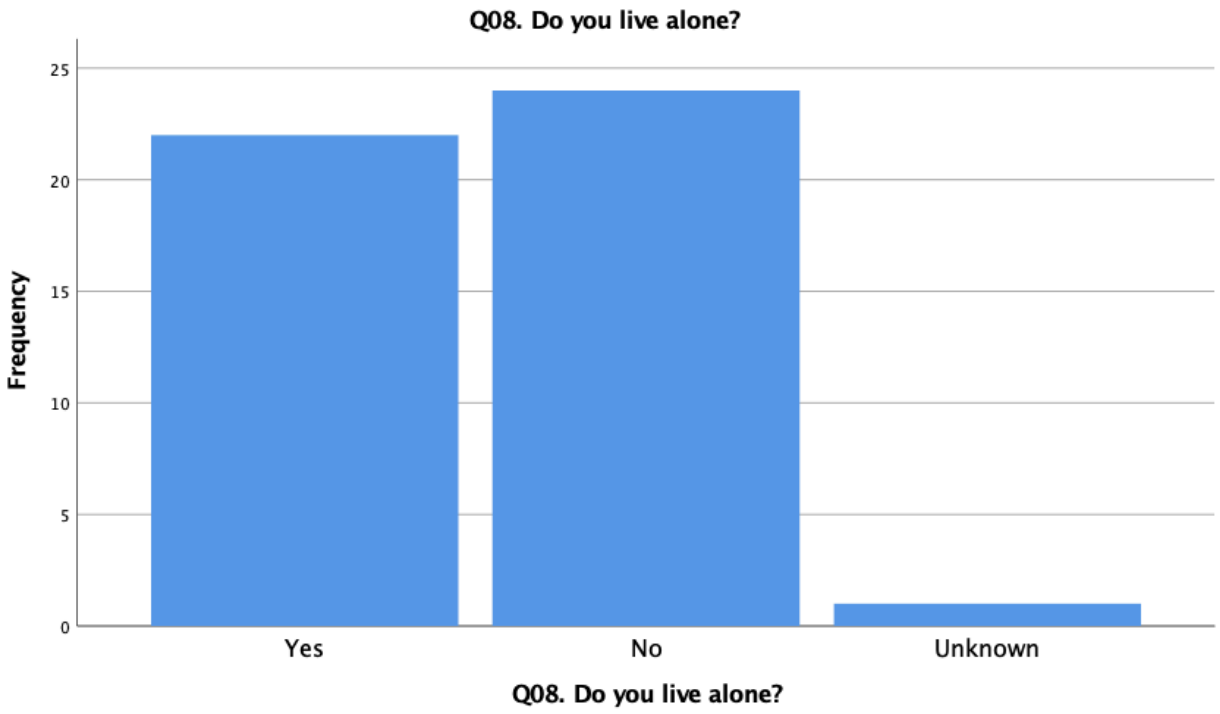
Appendix C: Analysis from ACL Participants

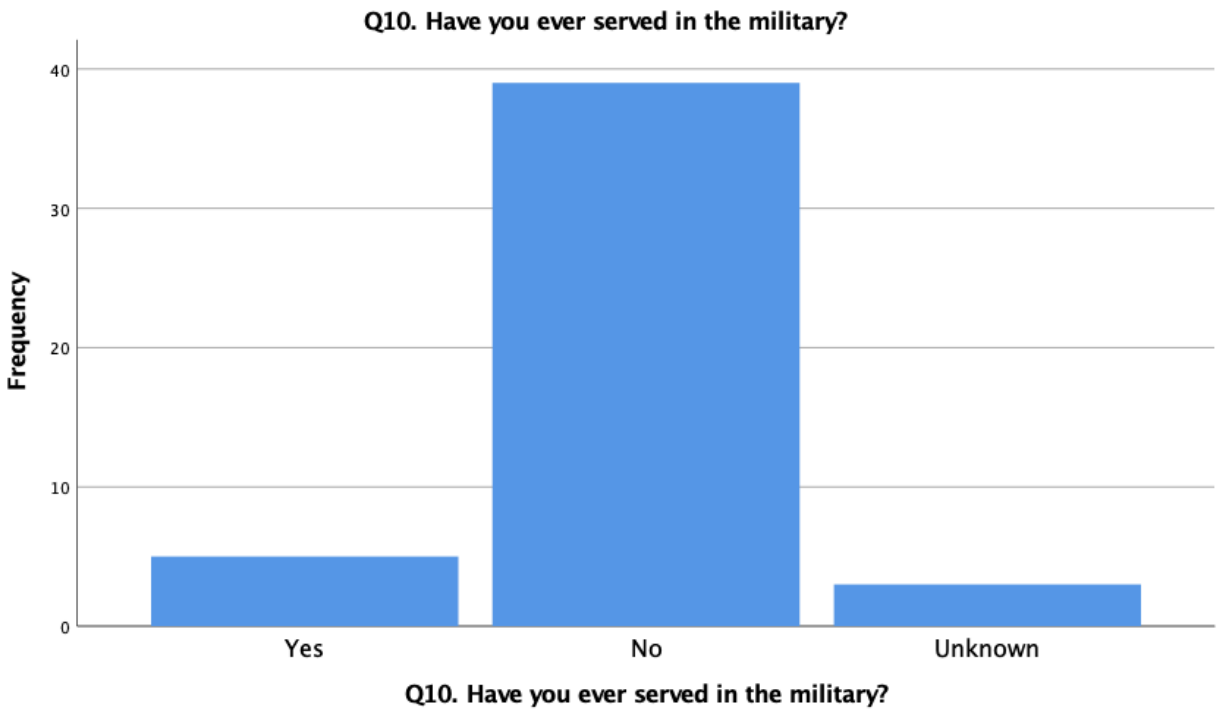



Q04. Are you of Hispanic, Latino, or Spanish origin?
Frequency
50
40
30
20
10
0
Yes
No
Unknown
Q04. Are you of Hispanic, Latino, or Spanish origin?

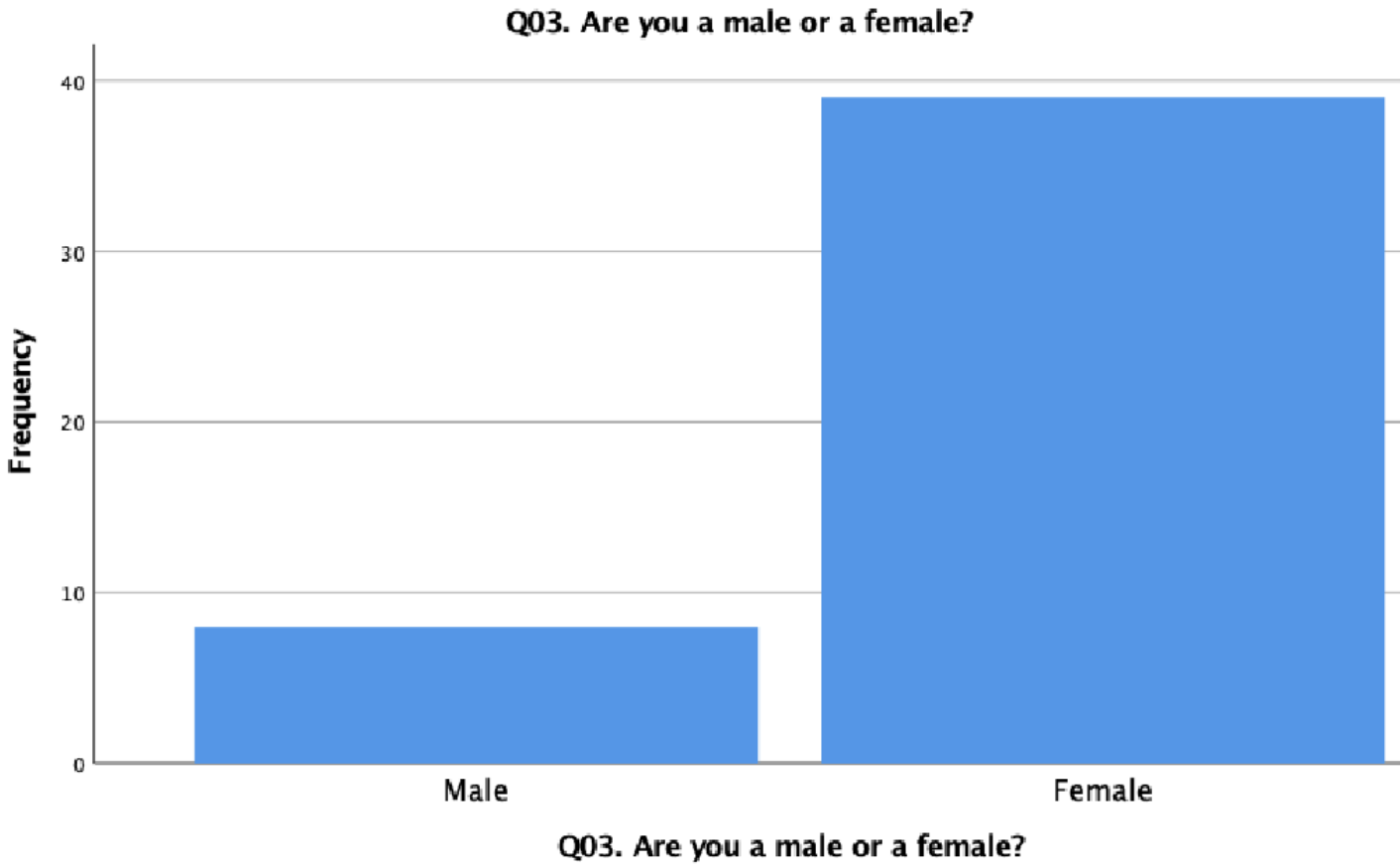

Q06. Are you deaf or do you have serious difficulty hearing?
Frequency
40
30
20
10
0
Yes
No
Unknown
Q06. Are you deaf or do you have serious difficulty hearing?


Q07. Are you blind or do you have serious difficulty seeing, even when wearing glasses?
Frequency
40
30
20
10
0
Yes
No
Unknown
Q07. Are you blind or do you have serious difficulty seeing, even when wearing glasses?


Q08. Do you live alone?
Frequency
25
20
15
10
5
0
Yes
No
Unknown
Q08. Do you live alone?


Q10. Have you ever served in the military?
Frequency
40
30
20
10
0
Yes
No
Unknown
Q10. Have you ever served in the military?

Bar Chart


Q03. Are you a male or a female?
Frequency
40
30
20
10
0
Male
Female
Q03. Are you a male or a female?

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