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Authors

Gamboa, Charlene

Julion, Wrenetha

Fogg, Louis

et al.

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Using Vignette-Based Methodology to Examine Study Recruitment in Older African American Adults: A Methods Paper

Charlene J. Gamboa · Wrenetha A. Julion · Louis Fogg · Dawn T. Bounds

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Abstract This study’s objective was to assess which caring recruitment behaviors correlate with the successful recruitment of older African-American adults—a two-step cross-sectional design employing a vignette-based survey methodology. Kristen Swanson’s middle-range theory of caring was used to guide the examination of African-American adults’ (65 years of age and older) perceptions of research-study-recruiter recruitment behaviors. This study’s main findings are twofold: Step 1: Seven of ten invited experts identified major revisions of the two core vignettes, written at an eighth-grade reading level and high school comprehension. Step 2: A 51% response rate yielded findings that this methodology successfully captured older African-American adults’ perception of research study recruiters’ behavioral characteristics during the recruitment process. Older African-Americans who received the hypothetical caring vignette were twice as likely to indicate their willingness to enroll in a research study with a high commitment (i.e., brain donation) compared to their counterparts who received the hypothetical uncaring recruitment scenario. Vignette-based survey methodology holds promise as a tool for informing the recruitment of older African-American adults and other minorities into federally funded health-related research studies.

Keywords Vignette · Recruitment · Minority · Older adult · African-American · Decision-making

Introduction

United States (U.S.) minorities are chronically under-represented in federally funded health-related research studies. African-Americans and non-White Latinx-Americans represent 13% and 18% of the American population, respectively; however, the reported combined enrollment of minority populations has been reported to be less than 5% [1]. There is mounting evidence of inequities in the allocation of recruitment resources to aging adults, specifically older African-Americans. Despite federal mandates to improve representativeness in research, minimal gains have been achieved since the 1993 enactment of the federal inclusion policy [2]. Examining recruitment interactions between the prospective research participant and recruiter is warranted to advance participant accrual knowledge. Furthermore, increased understanding of recruitment from minority participants’ perspectives may contribute new knowledge regarding recruitmentology (the science of recruitment) and bolster efforts to meet federal mandates to diversify research samples [3].

Recruiting a representative sample is a vital aspect of research [4]. However, researchers frequently endorse several major challenges in conducting federally funded epidemiological studies and clinical trials in the U.S.: (1) inadequate accrual of targeted populations leading to non-representative samples, resulting in failed or

C. J. Gamboa (✉) · W. A. Julion · L. Fogg
College of Nursing, Rush University Medical Center, 600 S.
Paulina Street | Suite 1080, Chicago, Illinois 60612, USA
e-mail: charlene_gamboa@rush.edu

D. T. Bounds
University of California, Irvine, Sue & Bill Gross School of
Nursing, California, CA, USA

delayed clinical trials at rates of approximately 30% and 80%, respectively [5]. (2) Inequitable recruitment strategies that fail to engage diverse participants [6]. Insufficient allocation of human resource and funding that perpetuate inequities in participation opportunities [1].

No known gold standard exists for the successful recruitment of minority participants. Moreover, there is minimal research on the older African-American adult's perspective of the recruitment process. Few health-related research studies have reported successful recruitment of older African-American adults, nor have they included participant perspectives. The few that have disclosed their success employed proactive and reactive recruitment strategies such as localized posting of flyers, public presentations, mailers, individualized recruitment visits, and mass advertisements [7]. To our knowledge, there is no known validated tool to measure recruiters' recruitment behaviors and how those behaviors correlate with participant accrual in research studies. However, behavioral characteristics such as being trustworthy (i.e., failure to keep commitments), and conveying the sense that the associated institution was being disingenuous or insincere have been reported as barriers to recruit African-Americans into health-related research studies [7]. The purpose of this paper is to describe the development, evaluation, and pilot testing of written vignettes (hypothetical scenarios based on real phenomena) to garner older African-American's perspectives of recruiter's recruitment behaviors.

This study examined older African-American adults' perceptions of research recruiters' behavioral characteristics during the recruitment process. The objective was to determine which recruiter behaviors/characteristics "more or less caring" correlate with successful recruitment outcomes. Three research questions guided this study: (1) Can written vignettes successfully simulate realistic recruitment scenarios with older African-American adults currently enrolled in a longitudinal health-related research study that includes a higher commitment (i.e., brain donation); (2) Is vignette-based survey methodology a successful method to measure perceptions of caring recruitment behaviors based on Swanson's middle range theory of caring; and (3) What is the feasibility of using a vignette-based survey methodology in an existing longitudinal health-related research study?

Literature Review

There is scarce empirical knowledge on successful recruitment strategies to accrue older African-American adults as participants in federally funded research studies [8]. The recruitment process rarely considers the perspectives of the study participants. Thus, there is a need to examine the components of the recruitment process systematically. A substantial body of scholarly works focused on recruitment outcomes (i.e., enrollment, refusals, barriers, and facilitators) in African-Americans are focused on the perspectives of the investigative teams. These teams include the principal investigators [9], study recruiters' [1], community representatives [10], community-health workers and gatekeepers [11], research study coordinators [12], and third-party collaborators such as clinical staff nurses, doctors, navigators, or advocates [13]. Even so, the viewpoints of the investigative teams contribute minimally to efforts aimed at understanding the perspectives of older African-American adults, garnering recruitment equity, or facilitating participation in federally funded health-related research studies.

Recruitment

Recruitment is the process used to invite targeted populations to participate in research [14]. Two primary recruitment typologies are frequently reported [15]. Proactive (active) recruitment occurs when the investigative team initiates direct contact with individuals. Researchers less frequently utilize proactive recruitment due to high resource consumption [13, 14]. Reactive (passive) recruitment utilizes indirect communication (mass print advertisements and announcements) to instigate potential participants to contact research study personnel [14]. Passive approaches are most successful with U.S. middle-class white women and have proven to lead to minimal or limited accrual success with U.S. minority populations [16].

Theoretical Framework

Swanson's middle-range theory of caring (S.T.C.) is a nursing theory grounded in five mutually exclusive caring behaviors that reflect characteristics of the caring relationship: Knowing, Being with, Doing for, Enabling, and Maintaining belief: (a) Knowing — striving to understand what an experience means from the

perspective of the person living it; (b) Being with — authentically present with another person in order to convey that their experiences are meaningful; (c) Doing for — performing acts for others that they would do for themselves if at all possible; (d) Enabling — the provision of information, validation, support, and guidance so that the individual can actively participate in decisions; (e) Maintaining belief — providing the foundation of care, which refers to believing in another person's capacity to work through and find personal meaning in his or her experience regardless of the challenges or conditions faced [17, 18]. To our knowledge, S.T.C. has not been used to inform vignette-based methodology [19]. To examine this framework's utility with older African-American adults, S.T.C. was used to operationalize caring behavioral characteristics in written vignettes designed to depict recruitment scenarios.

Vignette-Based Methodology

Vignettes are hypothetical scenarios used to simulate a real-world situation. Vignettes are traditionally used with research on sensitive topics [20] or vulnerable populations [21] and in situations that are otherwise arduous or unethical to reproduce with actual people [19]. Vignettes are also used to glean respondents' judgment, beliefs, or perceptions about hypothetical characters or situations [22]. For over 50 years, vignettes have been used across a broad spectrum of scientific research and practice [19] and have been used in various non-experimental training situations [23]. Vignette-based methodology survey design, employed in this study, incorporates written vignettes with traditional survey design to strengthen internal and external validity [19, 24]. Respondents are asked to answer survey questions pertaining to the hypothetical recruitment situation. Vignette-based methodology holds merit for working with vulnerable populations and within the context of sensitive topics; and yet to our knowledge, this study is the first to incorporate vignette-based methodology into recruitmentology.

Methods

Study Design

This 14-month (June 2017–August 2018) study utilized a systematically rigorous methodological approach

informed by Atzmüller [24] and Evans [19] and guided by Hughes and Huby [25, 26] and Aguinis and Bradley [27] to develop and evaluate written vignettes to be used in a pilot study. The study is demarcated into two main phases. Phase one describes the formation, construction, and evaluation of two core-vignettes developed using a two-step Delphi process [25]. In phase two, eight vignettes, which evolved from the two core vignettes, were piloted with a sample of older African-American adults [28]. The Rush University Medical Center Institutional Review Board approved this study. For access to the targeted study population, a data-use agreement was completed with the Minority Aging Research Study (MARS), an existing longitudinal (year 13) Alzheimer's-related research study centered on African-American adults age 65 years and older.

Data Collection

Phase One: Delphi Panel

A two-step Delphi process was used to conduct the proposed vignette-based research study. A reference librarian assisted with step one, which included scrutinizing the literature in an electronic search on the use of vignettes with subject recruitment, aging, minority populations, and the caring theoretical framework. Next, content experts (i.e., experienced members of various investigative teams, including principal investigators, statisticians, recruiters, recruiter trainers, and the author of the S.T.C. framework used in this study) were consulted on recruitment-related experiences with minority populations, vignette development and use, and survey design [29]. Personal communications were held with Kristen Swanson, the theorist behind Swanson's theory of caring, and Karen Kavanaugh, a local researcher who used S.T.C. with a vulnerable population [30]. Swanson and Kavanaugh were consulted to determine fit, operationalization, and measurement of caring behaviors using a vignette-based methodology with an aging population. The definitions and sub-dimensions of S.T.C.'s five caring behaviors were used to construct two core-vignettes [17, 18].

Ten research professionals were invited to participate on the Delphi panel to evaluate the two core-vignettes via face-to-face, email, or telephone communication to provide quantitative and qualitative feedback. The inclusion criteria for members of the panel, as described

above, included the following: 5 years minimum experience in their respective research field or profession; experience with minority or vulnerable populations having used active and/or passive recruitment strategies with minority or vulnerable populations; expertise leading or participating in federally funded research studies; having a track record of peer-reviewed publications that reported study's recruitment approaches and findings. Lastly, panelists were required to have survey design and/or evaluation experience. Panelists self-reported demographic variables, including race/ethnicity, gender, education, age, and profession, are provided in Table 1.

The evaluation was administered online via Survey Monkey™ with a 7-day assessment period of July 14–21, 2017. The panel was instructed to read through the two core vignettes. Both vignettes featured a young

white research recruiter making a presentation to a stadium-style church (mega church) with several thousand members in an attempt to recruit participants [31]. The two vignettes varied on caring behaviors—one with the recruiter exhibiting less caring behavior and the other exhibiting more caring behaviors. Next, the panelists were instructed to complete the vignette evaluation questionnaire to assess the vignettes [22]. The validated Sullivan vignette assessment tool was used to assess: (1) the extent to which the vignettes reflect a realistic recruitment situation, (2) caring behaviors of recruiter, and (3) operationalization of Swanson's five caring behaviors within the recruitment scenario [22]. Delphi panel participants were sent a thank you card for their service. Additional dimensions for age and race were added (i.e., older versus younger, age and African-American versus

Table 1 Participant characteristics of the Delphi panel and pilot sample

	Delphi panel of experts			Older African-Americans		Mean
	n=10			n=23		
	n	%	Mean	n	%	
Race/ethnicity						
African-American	08	80		23	100	
Latino	01	10				
White	01	10				
Gender						
Female	08	80		17	74	
Male	02	20		06	26	
Education (highest completed)						
9–12 (high school)				07		15.7 (±3.6)
13–16 (undergraduate)				09		
17–20 (graduate-masters)	02		19.6 (±0.8)	03		
>20 (professional-PhD/MD)	08			04		
Age (years)						
31–40	04		46.6 (±10.0)			
41–50	01					
51–60	05					
61–70				03		80.3 (±6.9)
71–80				11		
>80				09		
Profession						
Principal investigator	04	40				
Research recruiter	03	30				
Research trainer	02	20				
Evaluation expert	01	10				

White, race) to increase vignette heterogeneity. Therefore, at the end of the Delphi process, the two core vignettes were further demarcated based-upon three variables of age, race, and caring. Each variable was two-factor levels which yield eight vignette variations.

Phase Two: Pilot Feasibility Study

Sampling Strategy A random sample of 45 older African-American adults, 65 years of age and older, was recruited over two recruitment waves (wave 1 n=30, wave 2 n=15) from an existing longitudinal Alzheimer's-related research study with an optional brain donation component of the MARS [28]. This study's sample size of 45 aligns within the recommended range of 10–40 for exploratory studies [32, 33] and further aligns with the recommendation for 9% (n=28) of the targeted population (MARS n=310) [34]. Eligibility criteria included the ability to read, speak, and comprehend the informed consent process, aged 65 years and older, and current participant in the MARS. Our rationale for sampling African-Americans was based upon African-Americans' significant underrepresentation in federal-health-related research studies and the preexistence of a suitable sample.

Design and Data Collection This study was a cross-sectional vignette-based design intended to assess the judgment of caring recruitment behavioral characteristics from the perspective of older African-Americans. A study packet containing a cover letter, informed consent, HIPAA consent, two questionnaires, and a postage-paid envelope was mailed to prospective participants inviting them to take part in the study. To minimize burden, each participant was randomly assigned one of the eight vignettes that were developed during phase one, after the Delphi Panel process. The two questionnaires were the Recruitment Behavior Scale and the author-developed vignette evaluation questionnaire [22]. The individual consents were flagged to identify where signatures and dates were required to ensure older adults' clarity. The cover letter included highlighted areas that encouraged loved ones to review the consent with participants and provided the principal investigator's telephone number. To account for potential non-responsiveness to mailed surveys [35], we implemented a 6-week timeline including a 2-week wait

period that included delivery time by the United States Postal Services (USPS) and time for respondents to review the research study packet with loved ones. Weeks 3 and 4 were slated to call participants to confirm the research study packet's receipt and answer questions. Week 5 was designated for contacting participants who had not returned completed packets. By week 6, we projected the return of all completed packets. The study packet was mailed to 30 participants in wave 1, with the projected goal of receiving at least two participant responses for each of the eight vignettes. This goal was not met for two reasons: (1) mail sent through the USPS did not reach the participants and was returned to study staff, and (2) participants had moved without a forwarding address or were deceased. Thus, an additional 15 respondents (wave 2) were needed to achieve the target of two completed evaluations per vignette. The 6-week protocol was repeated with the second wave of prospective participants.

Measurements Eight vignettes were designed to depict realistic recruitment scenarios (see Table 2). The first-author-developed 3-item evaluation tool assessed participants' perception of the vignette's realism, the judgment of the vignette character's caring behavior, and assessed participants' inclination to engage in high-commitment research such as postmortem brain donation. Swanson's Caring Professional Scale (SCPS), which is designed to be used by vulnerable patients to assess healthcare professionals' level of caring, was also administered. With the author's permission, the SCPS was modified from the original 18 items to 14 items. The four items removed were related to clinical encounters (e.g., #7 "clinically competent"; #14 "Technically skilled"; #16 "visibly touched by your experience"; #17 "able to offer you hope?")

Data Analysis Data were analyzed in Microsoft Office 365™ and IBM SPSS v22.0™. Descriptive statistics (basic demographics) were depicted in frequency and contingency tables for the phase one Delphi panel participants and phase two pilot sample. The risk ratio was used to analyze the three-factor levels on the impact of age, race, and caring on participants' likelihood to make a higher commitment to the study (i.e., brain donation). Microsoft Word 365™ was used for vignette readability analysis for reading grade and comprehension levels.

Table 2 Phase one: Core and pilot vignette characteristics

Vignette (count)	Recruitment behaviors (caring vs uncaring)	Age (younger 42y vs older 65y)	Race (African-American vs White)	Readability	Mean (standard deviation)
Core vignettes					
V _{Core1}	Caring	Younger adult	White	F Reading ease 78.3 F-K Grade level 05.9 Word count 297	
V _{Core2}	Uncaring	Older adult	White	F Reading ease 66.3 F-K Grade level 07.9 Word count 428	72.3 (± 8.4) 06.9 (± 1.4) 361 (± 90.5)
Pilot vignettes					
V _{1a}	Uncaring	Younger adult	African-American	F Reading ease 78.3 F-K Grade level 05.9 Word count 218	
V _{1b}	Uncaring	Younger adult	White	F Reading ease 80.2 F-K Grade level 05.6 Word count 218	
V _{1c}	Uncaring	Older adult	African-American	F Reading ease 78.3 F-K Grade level 05.9 Word count 218	
V _{1d}	Uncaring	Older adult	White	F Reading ease 80.2 F-K Grade level 05.6 Word count 218	
V _{2a}	Caring	Younger adult	African-American	F Reading ease 80.8 F-K Grade level 06.0 Word count 325	
V _{2b}	Caring	Younger adult	White	F Reading ease 82.2 F-K Grade level 05.8 Word count 325	
V _{2c}	Caring	Older adult	African-American	F Reading ease 80.8 F-K Grade level 06.0 Word count 325	
V _{2d}	Caring	Older adult	White	F Reading ease 82.2 F-K Grade level 05.8 Word count 325	80.3(± 1.5) 5.8 (± 0.12) 271.5 (± 57.2)

The Flesch-Kincaid (F_K Grade level) Reading Grade score is an estimate of what level of education an individual will need to be able to read the text easily

Flesch Reading Ease Score (F Reading ease) — higher scores = simpler text. A reading ease score closest to 100 reflects text that is straightforward and easy to read. A score of 60–70 is considered acceptable/normal range

Results

Phase One

The Delphi panel feedback substantially augmented the vignettes, and that strengthened participant immersion and facilitated participants' likelihood of inserting themselves in the hypothetical recruitment situation [36]. Seven of ten invited research professionals reviewed the two core vignettes and assessed the vignettes formation, construction, and readability. All vignettes were written in a single-paragraph format. Additionally, Figure 1 portrays the CONSORT diagram that depicts the Delphi panel and pilot sample recruitment. The Delphi panel feedback from phase one of the study resulted in significant changes to the vignettes to be piloted in phase two. Three specific changes were recommended: (1) recruitment typology was altered from group-based to one-on-one recruitment; (2) more straightforward vocabulary with fewer words per sentence, and terms not easily understood were removed (i.e., mega church); and (3) the fictitious recruiter's age and race were identified in the two core vignettes.

While adhering to the same writing parameters (see Figure 2) and constrictions employed in initial vignette construction, the vignettes were strategically altered for precise wording, present tense, and third-person voice [34]. The two core vignettes were delineated into eight vignettes in which the recruiter's age, race, and caring recruitment behavior were manipulated. The recruitment scenario was altered from a group-based recruitment situation to a 1-on-1 interaction between the recruiter and the individual being recruited. The eight

vignettes were written at a fifth-grade reading level with a mean of 5.8 (range 5.5 to 5.8) as determined by Microsoft Word Flesch-Kincaid reading levels; the reading comprehension level was 80.4, which is understood at a high school level [29]. Table 2 provides further information on the characteristics of the two core and eight piloted vignettes.

Phase Two

Via the phase two pilot study, we sought to answer three research questions, RQ1: Can written vignettes successfully simulate realistic recruitment scenarios with older African-American adults currently enrolled in a longitudinal health-related research study that includes a higher commitment (i.e., brain donation)? Twenty-one of 23 participants (91.3%) agreed that the written vignette methodology was a successful method to simulate realistic recruitment scenarios. RQ2: Is vignette-based survey methodology a successful method to measure perceptions of caring recruitment behaviors based on S.T.C.? Respondents' mean score of 1.14 (S.D. ± 0.36) (range=0–2) on the participant feedback survey supported the use of written vignettes to measure perceptions of caring behaviors. RQ3: What is the feasibility of using a vignette-based survey methodology in an existing longitudinal health-related research study? The response rate of 51% (23 of 45 participants) suggests that vignette-based survey methodology is feasible for use in a sample of older African-American adults.

We piloted the eight recruitment vignettes derived from the two core vignettes with the targeted population. As shown in the results (Table 2), the variables were

Fig. 1 Delphi and population sample CONSORT diagram

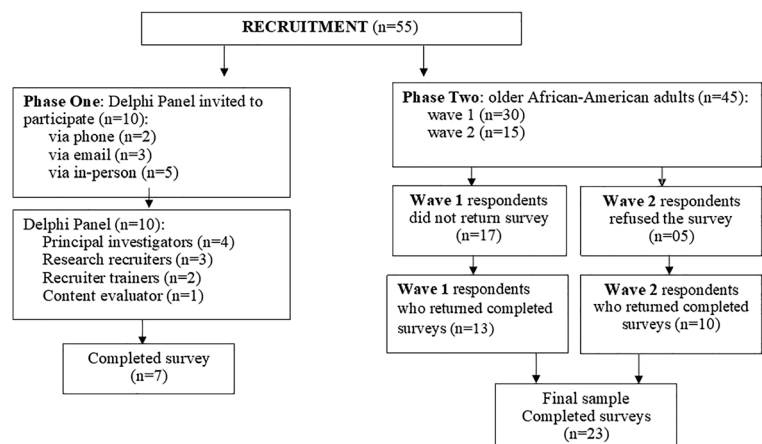


Fig. 2 Delphi instructions and survey

Evaluation of Two Core Recruitment Vignettes

2. CORE VIGNETTE 1

INSTRUCTIONS: Based on your research expertise recruiting minority populations, please answer the following questions about Core Vignette One.

CORE VIGNETTE ONE

Theresa is a 23 year old white woman. Her job is to get 50 African American adults, 65 years of age and older to sign up to be in a memory study. She has to recruit people without memory issues who will agree to be in the study for many years. The person being recruited is asked to give their brain to the study when the person passes away (dies). The memory study is facilitated by Delay University that is in a large mid-western city. To meet her recruitment numbers, Theresa chooses to recruit from African American mega churches. Today, Theresa goes to a senior health ministry meeting with over twenty members. Shortly after the meeting starts, Theresa walks over to who she thinks is in charge and asks to be placed at the top of the agenda to talk about the study. Theresa is given ten minutes. She reads the study flyer to the group staying within the given time. Based on the flyer, she gives the names of the researchers, why they are doing the research study and who they are asking to be research volunteers. Someone asks Theresa to share her personal thoughts about research and her belief on brain donation. She says a rule of Delay University is not to share personal beliefs about any topic while she is on the job. Then Theresa thanks the group. She leaves the meeting quickly, leaving behind a stack of study flyers on a table near the door. Prior to the meeting, Theresa placed an ad in the church bulletin. The ad had a picture of a sad older person looking out a window. The top of the ad read, "Join our study." Information on how to contact the study team was at the bottom of the ad".

delineated by a 2×2×2 factor of age (older, younger), race (African-American, White), and caring (caring or uncaring). The mean age of the study participants was 80.3 (SD ± 6.9). Wave one response rate was 43.3% (n=13/30). The remaining 17 individuals were considered nonresponsive due to death or having moved with unknown forwarding addresses. Wave two achieved a 66.7% response rate (n=10/15). The remaining five individuals refused to complete the survey citing limited availability due to travel.

Of the three vignette variables, caring had the overall strongest effect (RR 2.0). In this study, participants who received the caring recruitment vignettes were twice as likely to make a higher commitment to the hypothetical study, such as brain donation, compared to participants who received the uncaring scenarios. The effect size or risk ratio (R.R.) was not statistically significant due to the small sample size, see Table 3.

Discussion

Phase One

The Delphi expert panel proved crucial in the development of the vignettes and testing of survey methodology. The process involved multiple consultations, a literature review, and the development of several iterations of two-core recruitment-centered written vignettes. The Delphi panel members' feedback on the two core vignettes

helped ensure that the final eight vignettes were relevant to the targeted participants. [36]. For example, the panelists' feedback illuminated areas of the hypothetical recruitment scenario that might have been misinterpreted or perceived as disrespectful, or irrelevant. Furthermore, the panelists' recommendations helped to transition the recruitment venue from an impersonal situation to an intimate environment. The vignette's language was made more familiar, and the fictitious recruiter's age and race were matched to the study participants.

Culturally aligned and caring communication that demonstrates respect for the prospective participants

Table 3 Association of caring behavior with likelihood to make higher commitment to study

likely to enroll in brain donation study	Vignette caring			Risk ratio = 2.00*	
	No	Yes	Total		
Yes	Count	4	8	12	
	Percent	33.3	66.7	100.0	
No	Count	4	2	6	
	Percent	66.7	33.3	100.0	
Unsure	Count	2	3	5	
	Percent	40.0	60.0	100.0	
Total	Count	10	13	23	
	Percent	43.5	56.5	100.0	

* Participants are two times as likely to enroll in brain donation study when recruited by a recruiter who exhibits caring behavior during the recruitment session

could improve recruitment and retention rates [37]. Examples of small concrete changes in recruitment and other research study-related materials include using purposeful language and images similar to the targeted population. Investigators must also consider the tone and tenor of interpersonal dialogue in ways that communicate concern and caring [30].

Phase Two

The pilot study findings yielded insight into the factors that can facilitate older African-American adults' likelihood of taking part in a health-related research study. The written vignettes successfully simulated realistic recruitment scenarios that revealed the importance of caring recruitment behavior in real-world recruitment settings. This lends credence to the importance of employing and training research recruiters who can enact the appropriate caring interpersonal skills [17, 18] and adapt to the individual or group's recruitment needs. Research teams must collaborate throughout the protocol-development process to develop suitable communication tools. An example of caring recruitment includes developing communication tools that can be enacted in face-to-face encounters while demonstrating respect for the individuals being recruited.

This study successfully deployed written vignettes, formulated by a Delphi panel of experts with in-depth knowledge of the target population, to simulate a real-world recruitment scenario. It is imperative to garner detailed knowledge of one's target population and how they interact with the world in general prior to developing a recruitment strategy. For example, older African-American adults interact with the world through social networks (church, service, political, community-based organizations) [38]. Their social networks are fueled by personal gains and trust in individuals included in their social circles. Social networks can also potentially help to minimize the vulnerability of older adults by protecting them from those who might seek to take advantage of them. [39]. Engagement efforts must balance research participation against the demands of safely navigating the world as older African-Americans adults.

This pilot study utilized a traditional USPS mailer recruitment approach. However, an unanticipated mailing glitch occurred with the USPS, and delays in delivering the study packets extended this study's recruitment period by an additional 6 weeks. Subsequently, the

51% response rate was gratifying and confirmed that older African-Americans are willing to participate in research studies via mail. Notwithstanding, increased reliance on today's technologies (tablets, iPads, smartphones, smartwatches, internet, web-based interfacing) and other high-cost technology-based recruitment modalities for reaching participants, a considerable percentage of the older African-American adult population may be left behind. This type of high-technology research engagement could consequently further contribute to the ongoing underrepresentation of the minority aging population in health-related research.

While recruitment is habitually included in research protocol design, there is typically not enough attention to the intricacies of individualized recruitment strategies for older African-American adults. Thus, recruitment shortfalls can further contribute to the decades of disproportionate health disparities and the concurrent underrepresentation of minorities in health-related research studies. Researchers may need to consider the importance of investing in caring recruitment strategies appropriate for the aging population during the grant development phase. Investing in appropriate recruitment strategies may include the investment of time and human resources prior to the launch of the research study to garner information that will promote the development of caring recruitment strategies that are culturally and age-appropriate [37].

Strengths

Based on the literature reviewed for this study, we are aware of no published empirical studies that have addressed older African-American adult's perceptions of the recruitment process. Furthermore, none specifically employed a vignette-based methodology with a survey design. Our study contributes to the vignette-based literature by providing details that are not typically provided in vignette-based scholarly works [22]. Our vignette development process's structure and rigor were guided by two proven processes to construct and evaluate written vignettes [26, 27]. As a result of methodological rigor, our sample was representative of the older African-American adult population—primarily female.

Our findings contribute to the recruitment literature centered on the inclusion of older African-American adults in health-related research because the participant's viewpoint of the recruitment process matters. In particular, the recruitment process impacts enrollment

decisions. Understanding the recruitment process from the perspective of older African-Americans as study participants strengthens scientific validity, generalizability, applicability, and acceptability of research by expanding research to under-represented segments of the U.S. population.

Limitations

This pilot study did not yield inferential statistical significance due to three primary limitations [12]. First, since analysis of the factors of age, race, and caring was not statistically significant, we are unable to generalize beyond the current sample. Second, since the participants were enrolled in an existing longitudinal study, they may have been more inclined to participate in this pilot study. Third, there was a lack of consistency in the administration of the survey. A few participants chose to complete the survey by phone, either because they failed to mail in the written research packet or because they suffered from visual impairments. The survey different modes of survey administration may have contributed to a bias in participant responses based on the administrators' inflections and tones over the phone, but a statistical comparison of sample differences was not conducted.

Conclusion

This study contributes to the published literature advocating for investment in recruitment equity. Recruitment equity requires the allocation and appropriate distribution of funds, time, and energy that aligns with the target population's needs. Further examination of the recruitment process from the older African-American adults' perspective could ascertain decision-making preferences related to study enrollment, inform recruitmentology [3], and highlight the intricacies of nuanced recruitment strategies for target populations. More nuanced recruitment strategies acceptable to older African-American adult populations can increase their recruitment and engagement in research and potentially diminish health disparities.

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Declarations

Institution Review Board This study was approved by the Rush University Medical Center Institutional Review Board.

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