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# Homeless and marginally housed Veteran perspectives on participating in a photo-elicitation research study

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# Homeless and marginally housed Veteran perspectives on participating in a photo-elicitation research study

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### Abstract

Photo-elicitation interviewing (PEI) seems a valuable tool for engaging marginalized populations in research despite documented challenges. Given limited data on acceptability of PEI among homeless and marginally housed Veterans, this evaluation aimed to characterize their research experience. Veterans took photographs about health, health behaviors, and health care which facilitated semi-structured interviews. Their research study experience was assessed via a modified Reactions to Research Participation Questionnaire-Revised (RRPQ-R), along with additional survey and open-ended questions. Of the 20 participants who consented and participated, 16 (80%) completed the exit surveys. Most participants (>88%) indicated favorable experiences and limited drawbacks. Respondents disagreed that participation was difficult or overly time consuming. Many indicated intense or unexpected emotionality. Open-ended responses indicated appreciation of photography, interview experiences, and connection with study staff. Transportation was the most cited barrier. Overall, experiences were reportedly emotionally challenging, but positive. PEI appears to be acceptable to homeless and marginally housed Veterans for eliciting their perspectives.

### Keywords

Homeless persons, patient experience, patient satisfaction, patient participation, photography, qualitative methods, Veterans, vulnerable populations

### Disclaimer

The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the United States Government.

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### Conflict of Interest

All manuscript authors declare that there are no conflicts of interest (i.e., financial and personal relationships between themselves and others that might bias their work).

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## Introduction

Although homelessness among Veterans has decreased by 47% from 2009 to 2016, the 39,471 sheltered and unsheltered homeless Veterans in January 2016 made up approximately 9% of the homeless population in the United States.<sup>1</sup> In line with the Veterans Health Administration's (VHA's) commitment to end homelessness for Veterans, VHA implemented the Homeless Patient Alignment Care Team (HPACT). HPACT is a patient-centered medical home for homeless Veterans aimed at providing an integrated "one stop program" for their complex needs, including but not limited to health care (e.g., triage services, substance use and mental health treatment) and housing placement support.<sup>2</sup> With 60 HPACTs nationally in VHA, some studies have shown these clinics to be beneficial to their patients' health and other outcomes (e.g., fewer emergency room visits and hospitalizations);<sup>3,4</sup> unfortunately, research focused on understanding homeless and marginally housed Veterans and their health and health care experiences from their perspective is somewhat lacking.<sup>4</sup>

Visual-based research (VBR) methods are becoming increasingly popular among health services researchers; the combination of participant-generated photographs and interviews used in these methods provides an enhanced, intimate means for patient expression and engagement. VBR methods include photo-elicitation interviewing (PEI) and photovoice, two methodologies where participants use photography to expand the depiction and discussion of their perspectives and experiences.<sup>5-7</sup> In both cases, participant-generated photographs provide a unique platform or vehicle through which participants can share literal and/or metaphorical representations of their worlds, and discuss the significance of and personal meaning behind the photograph content.<sup>8,9</sup> The extent of participant involvement in shaping the research questions, interpreting results, and designing subsequent interventions or action steps differs across these two VBR methods, with photovoice incorporating more elements of community-based participatory action research.<sup>7,10</sup> PEI has broader uses than photovoice (e.g., identity and cultural studies, community and historical ethnography) and is also used as a tool in various areas of health care (e.g., nursing, gerontology, medical research, quality improvement projects, public health; individual and family therapy; child psychology).<sup>11-13</sup>

VBR methods have numerous advantages, which are particularly salient for vulnerable, marginalized, or disenfranchised patient populations, such as homeless and marginally housed Veterans, providing an opportunity for individuals who are sometimes "voiceless" to visually and verbally represent themselves, as opposed to being represented by others.<sup>8,14-18</sup> Potential Veteran HPACT participants for our study represented a marginalized

population that is disadvantaged in many ways. It was recognized they may be homeless, be poor, have multiple chronic pain issues, and would, in many cases, be older adults.<sup>1</sup> Unfortunately, most published reports with homeless or recently housed individuals include only brief, general descriptions of participant benefits or experiences in VBR studies as opposed to systematic assessments of participant experiences.<sup>7,17-20</sup> The purpose of this article is to characterize homeless and marginally housed Veteran experiences participating in and taking photographs in a PEI study.

## Methods

This research study was approved by the Institutional Review Board and the Research and Development Office at the Veterans Affairs Pittsburgh Healthcare System (VAPHS). Logistical lessons from designing and executing our PEI study, as well as more detailed qualitative methods and results, are outlined in previously published work.<sup>21,22</sup>

### *Main Study Design and Procedures*

The primary purpose of this qualitatively-driven mixed-methods study was to identify homeless and marginally housed Veteran perspectives on their health and health care using PEI. Based on qualitative standards for theoretical saturation, we aimed to recruit, enroll, and complete the study with 15-20 homeless and marginally housed Veterans receiving care at the VAPHS HPACT.<sup>23</sup> It is important to note that we used a somewhat broad definition of homelessness for Veterans in our study, including those who were marginally/unstably housed at the time of HPACT enrollment.<sup>24</sup>

There were three phases of participation, including orientation and instructions, photo elicitation interview 1, and photo elicitation interview 2 and exit survey. Participants met a research staff member at VAPHS for each phase of the study. Phase I involved participants completing a self-administered sociodemographic (i.e., sex, age, race/ethnicity, education, marital status, housing) and health (i.e., health status) questionnaire, being given digital cameras (with photo-taking prompts), and asked to take 15-20 photographs about the topics of health and health-related behaviors; a study team member collected the number of months the participant had been enrolled in VAPHS HPACT at time of consent by electronic medical record review after the visit. Veterans returned approximately 2 weeks later for Phase 2, at which time their photographs were printed and used to facilitate a 30 to 60-minute audio-recorded semi-structured interview about the same topics. Veterans were then given photo-taking prompts and asked to take 15-20 additional photographs and repeat the above process on the topics of health care quality and access.

### ***Exit Survey Design and Procedures***

During Phase 3, which included the second interview about the same topics, Veterans also completed an exit survey to assess their experiences in taking part in the study, which is the focus of this analysis. The exit survey was a 3-part instrument designed to assess overall experiences with PEI study participation as well as experiences taking photographs for the study.

Exit Survey Part I: Reactions to Research Participation Scale-Revised (RRPQ-R). To quantitatively assess Veterans' overall experiences with participation in this PEI study, the first part of the exit survey included, with the developer's permission, a modified version of the RRPQ-R.<sup>25</sup> The RRPQ-R comprises 23 items representing five factors related to research participation; three factors reflect positive aspects of research participation: Personal Benefit (4 items), Participation (4 items), and Global Evaluation (5 items), and two factors, Perceived Drawbacks (6 items) and Emotional Reactions (4 items), reflect negative aspects of research participation. Respondents indicate the extent of their agreement with each item, using a 5-point Likert-type scale (i.e., Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], Strongly Agree [5]). Eight items are reverse-scored. Higher scores indicate more favorable reactions to research participation. Because they were deemed not applicable for a qualitative and/or photo-elicitation interview study, two items from the Perceived Drawbacks domain were not included in our modified version of the RRPQ-R (i.e., "Knowing what I know now, I would participate in this study if given the opportunity," "Had I know in advance what participating would be like I still would have agreed to participate"). Additional modifications to the scoring of the RRPQ-R for this study are described below in the Analysis section.

Exit Survey Part II: Experiences with PEI Study Participation. To qualitatively assess Veterans' overall experiences with participation in this PEI study, the second part of the exit survey included five investigator-developed, open-ended questions, including: (1) "What did you like about participating in this research project?", (2) "What did you not like about participating in this research project?", (3) "If you've participated in research studies before, how was this experience similar or different?", (4) "If we could offer this research study again for a new group of participants, what would you change?", and (5) "What suggestions do you have for future researchers to improve Veterans' participation in research (specifically Veterans who may be facing unstable housing situations, at-risk for homelessness, or homeless)?"

Exit Survey Part III: Experiences with Taking Photographs in a PEI Study and Overall Experiences. In the third part of the exit survey, we used an investigator-developed questionnaire to assess participants' experiences with taking photographs in the study. Respondents

indicated their level of agreement with 10 statements using a 5-point Likert-style scale (i.e., Strongly Disagree [1], Disagree [2], Neutral [3], Agree [4], Strongly Agree [5]). Two final open-ended questions, "Were there things you wanted to take pictures of but were not able to do so?" and "Overall, how was your experience taking pictures for the research project?", were also asked at the close of the survey.

### ***Data Management and Analysis***

All quantitative and qualitative (open-ended, free text) data from the exit surveys were managed in REDCAP.<sup>26</sup> For Part I of the exit survey, due to small cell sizes, responses to the RRPQ-R items were collapsed from five response options into three categories: "Agree," "Neutral," and "Disagree." Frequency counts for these three categories were then generated for each item. The original developers of the RRPQ-R identified five factors for the scale, each of which contained four to six items. In order to facilitate comparisons across the factor scores, the original developers of the RRPQ-R "computed *scale means of the raw scores* for the items corresponding to each factor",<sup>25</sup> thus accounting for the minor differences in the number of items per factor (i.e., four versus six). Because we omitted two items from the RRPQ-R, four of our factors consisted of four items each, and only one consisted of five items. We thus opted to simply sum the raw scores for the items corresponding to each factor and then average the between-subject factor scores. This approach allowed for reduced loss of data granularity. For Part II of the exit survey, free-text responses to the open-ended questions regarding overall experience with PEI study participation were transcribed verbatim, reviewed to identify codes, then grouped into applicable categories and, finally, synthesized as summative themes. For Part III of the Exit Survey, means scores were computed for the individual Likert scale items regarding experiences with taking photographs in a PEI study.

## **Results**

### ***Sample Characteristics***

Of the 20 participants who consented and participated in the study, 16 (80%) completed the exit survey. The 16 exit survey participants were predominantly male (94%), African-American (56%), single (56%), had at least some college or vocational school education (57%), lived in rented or owned property at the time of consent (38%), and self-classified their health status as "fair" (56%) (Table 1). The mean age was 53.5 years (SD=8.1). The mean number of months enrolled as a patient at the VAPHS HPACT at time of consent was 16.9, with a standard deviation of 10.4 months. None of our participants had previous experience with VBR.

**Table 1. Sociodemographic and health characteristics of the 16 study participants for which data was analyzed\***

Characteristic	
Age in years, mean (SD)	53.5 (8.1)
Number of Months as an Enrolled Homeless Patient Aligned Care Team (H-PACT) Patient at Time of Consent, mean (SD)	16.9 (10.4)
	<b>n (%)</b>
<b>Sex</b>	
Male	15 (94)
Female	1 (6)
<b>Race</b>	
White	6 (38)
African American	9 (56)
American Indian	1 (6)
<b>Education</b>	
High school or lower	7 (44)
Some secondary education (no degree)	7 (44)
Associates Degree or equivalent	2 (13)
<b>Marital Status</b>	
Single	9 (56)
Married/Coupled	6 (38)
Widowed	1 (6)
<b>Housing at Time of Consent</b>	
Transitional housing	5 (31)
Staying with friends or family	3 (19)
Rented/owned property	6 (38)
Residential treatment	1 (6)
Unsheltered/street	1 (6)
<b>Self-Assessed Health Status</b>	
Excellent	0 (0)
Very Good	1 (6)
Good	6 (38)
Fair	9 (56)
Poor	0 (0)

\*Because of rounding, not all percentages add to 100.

Exit Survey Part I: Overall Experiences with PEI Study Participation: Reactions to Research Participation Scale-Revised (RRPQ-R). Collapsed frequency counts for the responses to the individual survey items on the RRPQ-R are presented in Table 2.

With respect to the “positive” factors on the RRPQ-R (Personal Benefits, Participation, and Global Evaluation), ≥88% of the participants indicated favorable research experiences in the study. Regarding the first “negative” factor on the RRPQ-R, the majority of participants (≥88%) indicated limited perceived drawbacks to research participation (Perceived Drawbacks). Regarding Emotional Reactions, the majority (75%, n=12) of participants indicated that their participation in the research study had raised unexpected emotional issues, with more than half (63%, n=10) indicating experiencing intense emotional reactions. More than half of the participants (63%, n=10) disagreed with the statement, “The research made me

think about things I didn’t want to think about.” Mean scores for each RRPQ-R factor are presented in Table 3.

Exit Survey Part II: Overall Experiences with PEI Study Participation: Open-Ended Questions. Representative responses and emergent themes of the open-ended, free text questions at the end of the survey are presented in Table 4.

Most positive entries dealt with artistic expression and interactions with study staff, including during interviewing. One response to the question of what was liked about participating offers a concise summary: “To express my thoughts and artistic creativity in a hopefully helpful way.” Respondents identified the interview and study staff interactions separately, but often conflated them in comments as well, suggesting that positive experiences with the study staff may have improved or facilitated the interview process and vice versa. “Enjoyed speaking with



**Table 2. Frequency of participant responses to individual items on modified RRPQ-R, by Factor (n=16)\***

RRPQ-R Factor	RRPQ-R Statement	Agree n (%)	Neutral n (%)	Disagree n (%)
Personal Benefits	I gained something positive from participating	15 (94)	1 (6)	0 (0)
Personal Benefits	I gained insight about my experiences through research participation	15 (94)	1 (6)	0 (0)
Personal Benefits	I found participating in this study personally meaningful	15 (94)	1 (6)	0 (0)
Personal Benefits	I found participating beneficial to me	14 (88)	2 (13)	0 (0)
Participation	I was glad to be asked to participate	16 (100)	0 (0)	0 (0)
Participation	I like the idea that I contributed to science	16 (100)	0 (0)	0 (0)
Participation	I felt I could stop participating at any time	15 (94)	0 (0)	1 (6)
Participation	Participation was a choice I freely made	16 (100)	0 (0)	0 (0)
Global Evaluation	I believe this study's results will be useful to others	14 (88)	2 (13)	0 (0)
Global Evaluation	I trust that my replies will be kept private	16 (100)	0 (0)	0 (0)
Global Evaluation	I think this research is for a good cause	14 (88)	2 (13)	0 (0)
Global Evaluation	I was treated with respect and dignity	16 (100)	0 (0)	0 (0)
Global Evaluation	I understood the consent form	16 (100)	0 (0)	0 (0)
Perceived Drawbacks	<i>I found the questions too personal</i>	0 (0)	1 (6)	15 (94)
Perceived Drawbacks	<i>I found participating boring</i>	0 (0)	1 (6)	15 (94)
Perceived Drawbacks	<i>The study procedures took too long</i>	0 (0)	0 (0)	16 (100)
Perceived Drawbacks	<i>Participating in this study was inconvenient for me</i>	1 (6)	1 (6)	14 (88)
Emotional Reactions	<i>The research raised emotional issues for me that I had not expected</i>	8 (50)	4 (25)	4 (25)
Emotional Reactions	<i>The research made me think about things I didn't want to think about</i>	4 (25)	2 (13)	10 (63)
Emotional Reactions	<i>I experienced intense emotions during the research session/ and or parts of the study</i>	4 (25)	6 (38)	6 (38)
Emotional Reactions	I was emotional during the research session	4 (25)	6 (38)	6 (38)

\*Note: Reactions to Research Participation Questionnaire-Revised (RRPQ-R) is scored on a five point Likert scale where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree. Scores of 4 and 5 are collapsed into the Agree column, scores of 1 and 2 are collapsed into the Disagree column. Reverse scored items are shown in italics.

**Table 3. Mean factor scores on modified RRPQ-R (n=16)\***

RRPQ-R Factor	Mean (SD)	Possible Total Factor Score
Personal Benefits	17.19 (1.87)	20
Participation	17.69 (1.54)	20
Global Evaluation	22.31 (2.21)	25
Perceived Drawbacks	17.44 (2.03)	20
Emotional Reactions	12.75 (3.44)	20

\*Note: RRPQ-R=Reactions to Research Participation Questionnaire-Revised, SD=standard deviation. All 4 items on the Perceived Drawbacks factor are reverse-scored, as are 3 items on the Emotional Reactions factor.

**Table 4. Questions, themes, and representative quotes for open-ended responses in Part II**

Open-Ended Survey Questions	Themes and Sample Quotations
<p>1) What did you like about participating in this research project?</p>	<p><i>A) Artistic and creative activity</i>                      “To express my thoughts and artistic creativity in a hopefully helpful way.”                      “...finding creative ways to express yourself through pictures can be relaxing.”                      “Mainly I enjoyed the freedom I was given to express myself through my historical views.”</p> <p><i>B) Altruism and service</i>                      “The fact that I could help others.”                      “I hope [the photographs] help out.”                      “Helping myself and others to focus on some of the issues that face Veterans in accessing care.”</p> <p><i>C) Self-expression and validation of perspective</i>                      “It made me think. It gave me a chance to express my time with VA.”                      “To express my thoughts...”                      “Helping myself and others to focus on some of the issues that face Veterans in accessing care.”                      “Talking about it”</p> <p><i>D) Interview experience</i>                      “Conversation, re: pictures.”                      “The interview.”                      “It was fun, I liked answering the questions.”</p> <p><i>E) Interpersonal interactions with study team</i>                      “The interview, and respect.”                      “...the empathy shown.”                      “Trust.”                      “The people.”                      “Enjoyed speaking with the interviewer.”</p>
<p>2) What did you not like about participating in this research project?</p>	<p><i>A) Transportation</i>                      “Waiting for the ride to come to the research building (VAMC transport).”                      “Getting transportation was a little time consuming.”</p> <p><i>B) Time</i>                      “Time constraints.”                      “Not a lot really, getting up early maybe but it wasn’t too early I suppose.”</p>
<p>3) If you’ve participated in research studies before, how was this experience similar or different?</p>	<p><i>A) Artistic and creative activity</i>                      “...it allowed me to use creativity.”                      “Picture taking was different.”</p> <p><i>B) Self-expression and validation of perspective</i>                      “It raised issues I hadn’t focused on before.”</p>
<p>4) If we could offer this research study again for a new group of participants, what would you change?</p>	<p><i>A) Provide enhanced instructions and guidance from staff</i>                      “Directions with camera (operating the camera; examples what to take pictures of).”                      “Have a longer and more open forum. The questions need to be more thought-provoking.”                      “More defined study area.”</p>
<p>5) What suggestions do you have for future researchers to improve Veterans’ participation in research (specifically among Veterans who may be facing unstable housing situations, be at-risk for homelessness, or be homeless)?</p>	<p><i>A) Provide transportation</i>                      “Get them home – transportation or visit at home.”                      “I was ok but some homeless veterans might need help with transportation issues.”                      “Higher monetary [remuneration], along with more bus tickets for transportation.”                      “Treat them with respect and ask them if they can get there.”</p> <p><i>B) Focus on engagement and interaction</i>                      “A lot more inter-personal discussions.”                      “1. Time to listen. 2. A little more personalized.”                      “Talk to the [domiciliary facility for homeless Veterans]. Ask questions.”</p> <p><i>C) Consider future studies on related topics</i>                      “Study for housing.”                      “...a lot of homeless vets may have problems with drug and alcohol issues or mental health issues, maybe have a similar study that asks questions about drug and alcohol or mental health issues described through pictures.”</p>



the interviewer” is representative of responses indicating a possible interdependence between these themes.

Responses concerning difficulties with transportation, photography, and the abstract concepts involved in participation made up the bulk of the negative responses. Transportation complications often referenced the cost of public transit, as well as the time necessary to travel; some participants’ travel took an hour and a half or more when using public transit. Including a 30-60 minute study visit, these participants could expect to spend four or more hours getting to and from a study visit.

Exit Survey Part III: Experiences with Taking Photographs in a PEI Study and Overall Study Experience. Overall, participants agreed that taking photographs allowed them to share greater amounts of information, and more detailed information with researchers, about topics that may typically be unnoticed or unsolicited (Table 5, items 7-8). They also agreed that through the process of taking photographs in the study, they were able to share useful information about their health care experiences and needs that would potentially be beneficial to VA clinicians, researchers, and policymakers (Table 5, items 9-10). Veterans found taking pictures in the context of the study to be enjoyable and confidence-boosting (Table 5, items 2-3), and reported favorable responses regarding the extent to which taking photographs made them feel like the “expert” or helped them share less spoken about topics in their lives (Table 5, items 1 and 6). With respect to potentially burdensome aspects of PEI study participation, participants disagreed with statements suggesting that using cameras in the study was difficult and that their involvement was overly time-consuming (Table 5, items 4-5).

**Discussion**

We sought to characterize homeless and marginally housed Veterans’ experiences participating in and taking photographs in a PEI study. Our study shows that many participants found the use of photographs enjoyable and thought it provided many benefits to themselves as well as researchers, including empowerment, discussion of neglected topics in participants’ lives, enjoyment derived from creative expression, producing rich data that they believe will further understanding of homelessness, and a sense of beneficence toward those they feel they were helping by participating. These were consistently represented in all three approaches used to evaluate participants’ perceptions of their research involvement and indicate that homeless and marginally housed Veterans yield significant benefit from participation.

Similarly, existing literature shows that VBR methods appear to be generally well-received by the individuals who participate in such studies. At the simplest level, study participation is often explicitly described as a positive activity that gives people something to do amidst the doldrums of illness or social isolation.<sup>8,10,17</sup> Participants describe the value of (a) creatively depicting their experiences and perspectives visually as well as (or instead of) verbally, (b) creating photographic narratives of their own recovery or illness experiences and then seeing these events through different eyes, and (c) sharing their views and concerns with a larger professional or community audience.<sup>10,14,17,18</sup> One study indicated that Veterans responded positively to VBR study participation,<sup>14</sup> and another suggested that Veterans were comfortable expressing their experiences related to mental health conditions, addiction, and trauma using VBR methods.<sup>15,27</sup>

**Table 5. Frequency of participant responses to individual questionnaire items regarding experiences with taking photographs in a PEI study (n=16)**

<b>Questionnaire Statement</b> <i>For me, taking pictures. . .</i>	<b>Agree</b> <b>n (%)</b>	<b>Neutral</b> <b>n (%)</b>	<b>Disagree</b> <b>n (%)</b>
1) Made me feel like the expert	8 (50)	5 (31)	3 (19)
2) Contributed to a greater sense of confidence about my health	12 (75)	4 (25)	0 (0)
3) Made my experience participating in this study more enjoyable	15 (94)	1 (6)	0 (0)
4) With the digital cameras was difficult for me	1 (6)	2 (13)	13 (81)
5) Took up a lot of my time	2 (13)	1 (6)	13 (81)
6) Helped me show a subject that I do not talk about very often	12 (75)	1 (6)	3 (19)
7) Allowed me to provide the researcher greater detail and new information	15 (94)	1 (6)	(0)
8) Allowed me to teach the researcher about my life and aspects that are otherwise ignored or taken for granted	13 (81)	3 (19)	0 (0)
9) Allowed me to show useful information	15 (94)	1 (6)	0 (0)
10) Will better inform future researchers, clinical staff, or policy makers on homeless Veterans’ health and health care needs	13 (81)	3 (19)	0 (0)

\*Note: PEI=Photo-elicitation interviewing. Item response options: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5).

Photo-elicitation has also been shown to empower participants and allow them to feel engaged with a vested interest.<sup>28</sup> In other cases, participants have expressed challenging aspects of study participation, such as burden associated with the planning, creating, and selecting the photographs,<sup>8,16,30</sup> as well as representing and discussing complex or painful feelings.<sup>8,29</sup> Other documented challenges to participation include being too ill or overwhelmed with practical needs to take photographs and participate in research activities.<sup>8,18,29</sup>

We question the current understanding of all five factors of the RRPQ-R as assessments of either positive or negative study engagement. Specifically, we did not find low scores on the Emotional Reactions factor coinciding with admissions of emotional distress or discomfort in any participant. As a result, we are inclined to reconsider interpreting the factor as a measure of emotional intensity experienced due to participation rather than interpreting this factor, as previous work, as a negative signifier.<sup>30,31</sup> As mentioned previously, none of the participants referenced any kind of emotional distress or discomfort in open-ended responses in the free-text experience survey. For example, when asked what they liked about participating in the study, one of the participants who scored lowest on the Emotional Reactions factor (score, 7 out of a possible 20) said, “It made me think. It gave me a chance to express my time with VA.” Another participant, who scored 8 on the Emotional Reactions factor, answered the same question with, “Enjoyed speaking with the interviewer”. These remarks, coupled with our survey results, suggest that the Emotional Reactions factor may

be more neutral than previously thought, and may in fact be better understood as a positive factor for some study experiences. This finding is consistent with recent literature on risks and benefits experienced between study groups which suggested that more vulnerable groups who were asked to discuss sensitive topics may be more likely to experience greater perceived benefits from qualitative interviews.<sup>32</sup>

An element of participation that could be perceived as negative, being challenged by the study methods, was uncommonly reported and is perhaps more nuanced. Some respondents suggested more guidance and direction from the research staff. Related comments included wanting “examples of what to take pictures of,” and a “more defined study area” (Table 4) as well as the fact that “it was difficult trying to take a picture of a thought” (Table 6). However, few participants found taking photographs with the digital cameras to be a difficult task. This may suggest that participants felt confident in their ability to take the photographs, but some had difficulty interpreting the given instructions in the use of symbolism and struggled with generating photographs they thought met the expectations or criteria of researchers. At the same time, an equal number of respondents provided comments about how photography was a powerful and enjoyable method of communicating with researchers, demonstrating a wide range of comfort with artistic expression.

In our review of the literature, we also encountered the common belief that vulnerable populations are more likely

**Table 6. Questions, themes and representative quotes for open-ended responses in Part III**

Open-Ended Survey Questions	Themes and Sample Quotations
Were there things you wanted to take pictures of but were not able to do so? If yes, can you describe a few examples?	“1. People involved. 2. VA buildings and staff” (due to federal restrictions about photography on government property) “Illicit activity”
Overall, how was your experience taking pictures for the research project?	<p><i>Provided an opportunity for artistic and creative activity</i>                      “For me it was fun. I consider myself artistic. However, it was difficult trying to take a picture of a thought.”                      “I’m not a good photographer, but I like taking pictures.”                      “Excellent! It was nice to get outside of the box of everyday living.”</p> <p><i>Provided opportunity for self-expression and validation of perspective</i>                      “The experience was stable and good for me. It gave me a voice.”</p> <p><i>Positive experience with study/ staff, unspecified</i>                      “Great” / “was Great” / “(Great) Thank you”                      “Very good!!” / “Good” / “It was a good experience”                      “Fun”                      “Pleasant”</p>

to experience negative consequences from emotionally charged research encounters.<sup>30,31</sup> However, risk in research participation is likely disproportionately overestimated within marginalized populations given the perceived sensitive nature and emotional content in studying their lived experiences.<sup>33</sup> Further investigation of participants' experiences may identify factors more accurately predictive of negative research experience, improving researchers' ability to assess risks and benefits of qualitative research involving vulnerable populations. Achieving a greater understanding of participant risks has heightened importance in study fields or settings, such as the VA, where in-depth qualitative methods are less frequently utilized and the perceived potential risks may act as a barrier to the implementation of qualitative research into the perspectives of vulnerable populations.

### Limitations

Our study has several limitations. Generalizability of our findings is somewhat limited because of the use of non-probability sampling, as well as the small sample size and relative homogeneity of the sample (e.g., sex, race/ethnicity, risk for homelessness, single urban VA study site). Further, the use of an exit survey to explore participant experiences in this research project meant that only participants who completed the entire study (16 out of 20) are reflected in this data. This raises the question of response bias. However, the retention rate of participants throughout this study (80%) is not unusual in studies requiring repeated follow up with homeless research participants, which in the past had been shown to range from 30%-80%.<sup>34</sup> Studies published with higher retention rates were noted to use methods not employed in this study for following up with participants, such as contacting friends of participants and/or maintaining a presence in participants' communities at locations they frequent.<sup>34,35</sup> Given that the retention rate of participants throughout the study was in line with other homeless research projects using repeated follow-up assessments, we are confident participants were lost to follow up due to common barriers to participation in research (e.g. lack of transportation to the VA) and not a lack of interest with the research methods. Many respondents also identified transportation as a significant barrier to research participation and suggested that meeting those needs would improve homeless and marginally housed Veteran involvement in research. Despite noted difficulty with transportation and time-related issues, almost all who completed the study disagreed with finding participation in the study inconvenient or too lengthy in the RRPQ-R; similar responses were noted in the "taking pictures" questionnaire (Table 5, item 5).

### Conclusions

This analysis of exit survey data from our qualitatively-driven mixed-methods study suggests that PEI, in part thanks to the central use of photography in the methodology, is an acceptable and often positive experience for homeless and marginally housed Veterans when exploring sensitive topics. These results also indicate that, contrary to expectations of vulnerable populations in the literature, homeless and marginally housed Veterans are capable of participating in research, evaluating the perceived costs and benefits of research participation, and performing emotionally challenging research tasks, like photo-elicitation interviewing, to their benefit. Participants indicated that they were ready and willing to continue contributing to future research despite their own unique barriers to research participation. Thus, we advocate the use of this method as a way to more fully involve homeless and marginally housed Veterans to allow them to voice their perspectives.<sup>15</sup>

Further use and investigation of qualitative research methods such as PEI may be warranted to further advance understanding of vulnerable populations, such as homeless and marginally housed Veterans. VBR methods provide a unique platform for informing and influencing public policy and opinion, including the perspectives of health care providers.<sup>7,8,18,36,37</sup> Use of this methodology can further benefit this population because evaluators can engage them as partners to enhance health care by gathering actionable data to improve care practices which also addresses their individual needs;<sup>28</sup> existing literature in the Department of VA using such participatory research and quality improvement initiatives shows that these methods generate insights that inform health care improvements and speak to stakeholders.<sup>28</sup> To successfully conduct this type of research with this special population, future studies should aim to meet them halfway by being prepared for emotional encounters, anticipating their needs, especially transportation, and collecting data regarding participant acceptability of research involvement at each stage of the study to better understand their perceived risks and benefits, as well as how these factors influence participant engagement and retention.

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