

STUDY NOTES

MEASUREMENTS FOR SAFER, HEALTHIER HOUSING AND PHYSICAL ENVIRONMENTS FOR VETERANS

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HIGHLIGHTS

WHAT ARE STUDY NOTES?

Study Notes provide a plain-language summary of a research project led or supported by the Atlas Institute for Veterans and Families. The aim is to ensure that Veterans and Families can better access and understand emerging research and key findings.

A single research study cannot give us all the answers, but every well-conducted study gives us a piece of the puzzle.

- A Veteran's home and physical environment are critical to well-being. Without accessible, suitable and affordable housing, Veterans' physical and mental health are impacted. This can put them at risk of homelessness.
- Veterans Affairs Canada (VAC) considers housing and physical environment — which includes housing security, sense of belonging, safety, indoor air quality and more — fundamental to Veteran well-being¹.
- VAC evaluates this domain using the "rate of Veterans among Canadian homeless" as an indicator, but it does not fully capture all the ways housing and physical environment may impact Veteran well-being².
- To address the gap, we need a better understanding of how housing and physical environment characteristics contribute to well-being. Researchers, service providers and policy makers use instruments to measure and evaluate different aspects of well-being. For this reason, it's important to determine parameters for measuring housing and physical environment and to identify their role in the assessment of well-being outcomes.
- This study aimed to identify current instruments, such as tools and scales, that measure aspects of housing and/or the physical environment and how they relate to well-being.

- Researchers identified 93 instruments through a study of peer-reviewed literature. Of these, 14 measure housing, 53 measure the physical environment and 26 include questions that measure both aspects. However, very few of these instruments have been applied to Veteran populations. This is a critical gap in the literature.
- Measurement tools — and the data or information they are designed to collect — can offer researchers, policy makers and service providers insights that lead to better, more focused programs, policies and interventions to support Veterans' transition to post-service life.



WHY IS THE STUDY IMPORTANT?

Canadian Veterans may face many challenges as and after they transition from the military to post-service life. One challenge they may experience is in securing safe, accessible and affordable housing and living in a healthy environment. **One in four Veterans report having a hard time adjusting to life after the military**³. Many deal with unemployment⁴, loss of military identity⁵, chronic health conditions⁶ and mental health challenges⁷. These challenges can also make it harder to find and secure stable housing, which can lead to homelessness⁸⁻¹⁰.

Research into the civilian population has found that physical and mental well-being can be impacted by various aspects of housing and the physical environment:

- Neighbourhood safety¹¹
- Crime levels and crime rates¹²
- Residents' views on how messy or disorderly the neighbourhood is¹²
- Presence of abandoned cars, graffiti and vacant homes¹²

Housing and neighbourhood satisfaction may play a critical role in overall quality of life and satisfaction with life.

Similarly, a Veteran's home and physical environment support their health and well-being. According to Veterans Affairs Canada's Veterans' Well-being Surveillance Framework (bit.ly/vac-veterans-well-being-surveillance-framework), the physical environment refers to housing, the home environment, housing security, sense of belonging, safety, indoor air quality, the design of neighbourhoods and the environment surrounding the home, such as physical infrastructure (e.g. community centres and food access).

VAC evaluates the housing and physical environment domain using the "rate of Veterans among Canadian homeless, which is the percentage of Veterans identified in the Canadian shelter population" as an indicator, but it does not fully capture all the ways this domain may impact Veteran well-being^{1,2}. Research is needed to better understand how housing, the physical environment and Veteran well-being are connected. To do so, we need to identify the characteristics (or parameters) researchers and decision makers can use to measure housing and the physical environment. We also need to understand how different aspects of housing and the physical environment may contribute to well-being outcomes for Veterans.



WHAT DID THE STUDY AIM TO FIND OUT?

The study identified available instruments, such as tools and scales, that measure aspects of housing and/or the physical environment, and how these relate to individual well-being. Researchers looked at what tools exist, what attributes they measure and whether any have been used to study the well-being of Veterans.



WHAT DID THE STUDY DISCOVER?

VALIDATING TOOLS

A validated tool means the tool has been tested to confirm it is accurate and reliable for measuring the unique experiences of Veterans.

Accurate: The tool truly measures what it is meant to measure.

Reliable: It gives consistent results over time.

The step of validating a measure may be especially important when studying Veteran populations because their life experiences can differ significantly from civilians.

The authors of this study relied on original authors' reports of validation in research publications.

The research team identified 93 instruments to measure housing and the physical environment and how they are connected to well-being. They found:

Housing: 14 instruments that measure four subdomains of housing: affordability (cost), conditions (quality), consistency (stability) and satisfaction with the home or living environment.

The most common housing-related attribute measured was housing quality. Five instruments assessed housing satisfaction, three measured cost and two assessed stability. Three instruments were used with samples of Veterans: the Veterans with Disabilities Search for Rental Housing Survey, Residential Time-Line Follow-Back Inventory, and the Home Falls and Accidents Screening Tool (HOME FAST). HOME FAST was tested with a sample of Veterans and war widows to identify potential barriers that could contribute to a person's risk of falling.

Physical environment: 53 instruments that look at areas such as physical disorder, safety, recreational uses and public spaces. This final category includes the person's perceptions of neighbourhood safety, vandalism, graffiti and crime.

Two instruments were used with Veterans: the Craig Hospital Inventory of Environmental Factors-Short Form and the Barriers to Physical Activity Questionnaire for People with Mobility Impairments.

Both: 26 instruments that assess both housing and physical environment.

The Shiraz Environmental Quality Survey assessed 13 of 20 physical environment subdomains and two of four housing subdomains. The Weinland Park Survey assessed six subdomains of the physical environment and all four subdomains of housing.

The [World Health Organization Quality of Life Scale](https://bit.ly/whoqol-scale) (WHOQOL, bit.ly/whoqol-scale) and [Lehman's Quality of Life Interview](https://bit.ly/lehman-qol) (bit.ly/lehman-qol) are the most commonly used tools covering both housing and the physical environment. WHOQOL has been validated in samples of Veterans. It assesses a person's perception of their quality of life and considers their culture and value systems, goals, expectations, standards and concerns. A modified version of Lehman's tool has been used in a sample of Canadian Veterans to assess their quality of life. To date, no studies have validated the tool's use in the Veteran population.

The study offers promising findings about Veteran well-being and its connection to housing and the physical environment. It highlights the need to expand measurements of Canadian Veterans' housing well-being beyond homelessness. While only a few of the identified instruments have been applied to Veterans, **the evidence shows that a healthy environment is critical to Veteran well-being and recovery**^{13,14}.



HOW WAS THIS STUDY CONDUCTED?

The research team completed a scoping review^{15,16}. This included:

- Identifying and refining the research question
- Finding relevant studies based on a list of criteria
- Compiling a list of studies
- Compiling a list of all relevant instruments mentioned in the studies and pulling out the most important information (data abstraction)
- Looking for patterns and repeating ideas in the research to organize the instruments accordingly

The team examined 233 studies that fit the project's criteria. Instruments were categorized based on the attributes they measured: housing, physical environment, or both housing and physical environment. Instruments that measured any attribute related to the home, housing or living environment were identified as housing instruments. This included:

- Satisfaction with their living situation
- Physical characteristics of the home
- Accessibility
- Safety

Instruments that assessed the physical environment included those measuring attributes such as:

- Satisfaction with the environment
- Presence of neighbourhood disorder or incivilities (such as vandalism)
- Land use
- Mobility

Instruments that considered attributes of both housing and physical environment were added to a third category.

Researchers applied a list of subdomains, such as cost, quality, stability and satisfaction with housing¹⁷. For the physical environment, subdomains included outdoor spaces, barriers, natural features, parking, safety and more¹⁸. The team then summarized the results of their analysis.



WHAT ARE SOME STRENGTHS AND LIMITATIONS OF THE STUDY?

This is the first review, to our knowledge, conducted to address the connection between Veteran well-being, housing and the physical environment. It offers a list of instruments used to measure housing and the physical environment as a domain of well-being.

The study includes both subjective and objective measures. Each of these is important for mental health and well-being¹⁹, but they are not always considered as options for measures to assess well-being as it relates to housing and the physical environment. The findings offer practical information about the instruments and how they may be useful in a Veteran context.

The study does not offer guidance on how to use the tools or information about the strengths of each tool.

Only a few of the tools have been applied to Veterans. Only one has been applied to a sample of Canadian Veterans.



WHAT ARE THE IMPLICATIONS OF THIS STUDY?

For Veterans and Families

Safe, affordable housing is important during the transition to post-service life and beyond. A healthy environment leads to better health, mental health and recovery.

Researchers are studying Veterans' post-service needs to support well-being and quality of life. The tools identified in this study — and the data or information they are designed to collect — can be used to offer insights that can help shape better policies, programs and actions that support Veterans.

For service providers

The results of this study can help guide service providers in their work. The findings provide insights into the role of housing and the physical environment in supporting well-being, and highlight tools that can help shape services and interventions for Veterans.

For researchers

A healthy home and physical environment are essential to Veteran health, well-being and recovery in post-service life. Providing the right support to Veterans requires research that informs policies, programs and interventions. This study underscored the need to expand the scope of how we measure Veterans' housing well-being beyond homelessness alone.

Future research on housing and the physical environment should consult Veterans, as very few instruments have been applied to Veteran populations. This will help adapt, assess and test the measurement tools with the Canadian Veteran population.

For policy makers

VAC's health and well-being framework lists housing and the physical environment as essential for Veteran well-being. Yet the indicator used to measure this domain is homeless shelter use. Further, the framework does not have an indicator to measure the physical environment. As a result, current approaches and indicators could be enhanced to capture the range of housing and environmental factors that influence Veteran well-being.

The findings suggest that a larger list of indicators should be considered to evaluate Veterans' well-being in this domain. Quality, consistency, cost, satisfaction, walkability, neighbourhood safety, landscaping, sidewalks and recreational infrastructure are important subdomains that should be evaluated, together with others. Adopting a broader range of instruments to assess housing and the physical environment can help identify patterns and trends in well-being, and ensure programs, policies and interventions that support Veteran health and well-being in post-service life.



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Please note the names listed include only those who have explicitly consented to being acknowledged as a contributor.

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