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Operationalizing Home with Basic Psychological Need Theory: Creation of the Need-Based Home Scale

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ABSTRACT

Recent authors have made significant advancements to the study of home with basic psychological need theory (BPNT). These authors conceptualize dwellings as structures that satisfy basic physical needs, whereas homes are dwellings that also satisfy basic psychological needs. A significant barrier to this stream of research is the lack of a supported measure of home created from this conceptualization, which prevents accurate and robust quantitative studies on need-based approaches to home. To remove this barrier from the present literature, the current article undergoes a seven-study scale development process to produce the Need-Based Home Scale (NBHS). The NBHS assesses the extent that participants believe that their residence satisfies basic physical and psychological needs, thereby perceiving it as a home. We show that the NBHS produces superb psychometric and validity evidence, as it demonstrates appropriate relations with both similar constructs and alternative operationalizations of home. We also show that the NBHS relates to important antecedents (residence quality) and outcomes (positive affect and life satisfaction). These results indicate that the NBHS is an appropriate operationalization of home stemming from need-based conceptualizations of home. Future research can apply this measure to test whether prior assertions in the study of home are supported when operationalized in this manner, and the NBHS can also be used to test whether broader tenets of BPNT are capable of explaining the dynamics of home. Together, the current article both removes barriers and opens new directions for research in the interdisciplinary study of home.

KEYWORDS

Home; dwelling; basic psychological need theory; scale development; psychometrics

Scholars of housing studies know the importance of home, as it deeply contributes to a sense of self and greatly enhances well-being (Blunt & Dowling, 2022; Easthope, 2004; Parsell, 2012). Despite its known importance, recent authors have observed that home is notably absent from psychological research, as theories and models of psychological well-being and associated constructs (e.g., thriving) rarely include the concept of home (Howard, 2025; Soleimani & Gharehbaglou, 2023). The absence of home suggests not only that theoretical perspectives in psychology are incomplete, but also that the study of home has yet to benefit from relevant theories and models of psychology. In turn, the study of home also remains incomplete. To resolve this tension, recent authors developed need-based approaches to the study of home. Howard (2025) adapted basic psychological needs theory (BPNT) to develop a need-based

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theory of home, suggesting that feelings of home are developed via the basic psychological need satisfaction by a dwelling. The author linked prior research on home to the tenets of BPNT, providing significant support that it may serve both as a unifying theory of home and a bridge between psychology and scholarship on home. Soleimani and Gharehbaglou (2023) provided initial quantitative evidence that need-based approaches may be capable of representing feelings of home, as they found a significant relation between need satisfaction and feelings of home. These sources together suggest that need-based approaches to the study of home are promising.

Adequate measurement is necessary for quantitative research (Flake & Fried, 2020; Hinkin, 1995, 1998; Jebb et al., 2021). For need-based approaches to thrive, well-supported measures are essential. While Soleimani and Gharehbaglou (2023) provided initial quantitative support for need-based approaches to the study of home, the authors did not undergo a complete scale development process to create their focal measure for the sense of home via need satisfaction, causing uncertainties regarding the psychometric properties and validity of this measure. The authors also did not tie all aspects of their measure to extant theory, such as the inclusion of "solitary and self-existence" as an aspect of "competence" need satisfaction (Soleimani & Gharehbaglou, 2023, p. 360). Their efforts are crucial in understanding need-based approaches to home, but a significant barrier in the literature is the lack of a well-supported measure to assess the need satisfaction of a dwelling to represent home (Howard, 2025). Without such a measure, the empirical study of need-based approaches to home cannot progress in a timely or accurate manner (Hinkin, 1995, 1998; Jebb et al., 2021; Willis, 2016).

In the current article, we remove this barrier in the literature. Following modern scale development guidelines (Clark & Watson, 2019; DeVellis & Thorpe, 2021; Jebb et al., 2021), we undergo a multiple-study process to develop the Need-Based Home Scale (NBHS) (Appendix A), which assesses feelings of home via the satisfaction of basic psychological needs by a dwelling. We begin our efforts by leveraging Howard's (2025) need-based theory of home to identify potential dimensions and subdimensions, while also discussing the theoretical basis for this need-based approach. We then report seven studies that result in the NBHS. We provide qualitative evidence that the applied conceptualization of home is sufficiently comprehensive in its dimensions, and we quantitatively show that the NBHS produces satisfactory psychometric evidence via exploratory and confirmatory factor analysis. We also quantitatively demonstrate that the NBHS produces satisfactory validity evidence through its relations with theoretically relevant constructs. In doing so, we show that the NBHS produces significant relations with important outcomes, including life satisfaction and meaning. These studies cumulatively support that the NBHS is an appropriate measure to assess feelings of home via need satisfaction.

Via these efforts, the current article provides several contributions. Research in psychology has yet to integrate home into relevant models and theories (Howard, 2025). This dearth may be because a need-based measure of home does not exist that was created via an established multiple-study scale development methodology. Our measure enables the integration of home into empirical psychology research on need-based theories, hastening progress that may be made in this domain. Perhaps more important, the creation of the NBHS provides an accurate tool to measure a novel conceptualization of home. Our scale development process provides strong support for the theoretical proposals of Howard (2025), suggesting that the

Table 1. Dimensions and subdimensions of the needs-based home scale.

Dimensions and subdimensions	Definition – Each begins with, "Sense that home allows inhabitant to … "
Autonomy Need Satisfaction	Enact control over their lives.
Behavioral Control	Decide their daily routine and life trajectory.
Authenticity	Be their true selves.
Competence Need Satisfaction	Have mastery over tasks important to them.
Reflection	Present aspects of themselves.
Positive Self-Presentation	Present a better version of themselves.
Relatedness Need Satisfaction	Be connected with others.
Close Others	Be connected with others who share the residence.
Community	Be connected with those in their local geographic area.
History	Be connected with those in the past.
Physical Need Satisfaction	Satisfy basic physical needs.
Physical Well-Being	Physically sustain oneself.
Stability	Possess a physical space for an extended period of time.

Note. Dimensions listed in bold. Subdimensions listed below their respective dimensions.

sense of home via need satisfaction can be represented by four second-order dimensions (autonomy, related, competence, and physical needs) and nine first-order dimensions (Table 1). Henceforth, novel theoretical proposals can be made regarding these dimensions, and broader tenets of BPNT can be applied in the study of home to test broader relations of these dimensions. These potential applications are relevant to all fields that study housing, enabling contributions to ongoing conversations in many different literatures (as detailed in our discussion). Thus, we enable the quantitative study of need-based theories of home by providing the NBHS, producing novel directions for future research that can lead to impactful theoretical development.

Before continuing, perhaps the largest contribution of the current article should be emphasized. Our applied theoretical perspective (Howard, 2025) is derived from BPNT, which is among the most widely applied psychological theories (Deci et al., 2017; Martela et al., 2023; Ryan & Deci, 2024). Authors from many disciplines have utilized BPNT to guide their studies, resulting in a rich scope of interdisciplinary investigation (Autin et al., 2022; Conesa et al., 2022; Ryan & Deci, 2024). The interdisciplinary nature of this research indicates that studies utilizing BPNT and theoretical perspectives derived from this theory, such as Howard's (2025) need-based theory of home, can be linked to this broad base of existing scholarship, enabling the production of more nuanced, accurate, and interdisciplinary models and theories. In our discussion, we detail how the NBHS and its underlying theoretical bases (Howard, 2025; Ryan & Deci, 2024) advance established topics in the housing literature, such as location and homelessness,[1] by incorporating this interdisciplinary scholarship. We further highlight novel endeavors possible by applying the NBHS and integrating findings from domains both familiar and unfamiliar to the housing literature, ranging from business (e.g., finance), to social sciences (e.g., psychology), to humanities (e.g., literary studies). By drawing these connections, we identify how the NBHS creates interdisciplinary integrations to open novel avenues for research in the housing literature.

Background

Basic Psychological Needs Theory

BPNT proposes that people have innate physical and psychological needs (Van den Broeck et al., 2016; Vansteenkiste et al., 2023). Physical need fulfillment is necessary for

comfortable survival (e.g., shelter), whereas psychological need fulfillment enables states of heightened psychological well-being, such as thriving and self-fulfillment. Whether consciously or subconsciously recognized, unfulfillment spurs significant motivation to fulfill the requisite needs, causing people to go to great lengths to satisfy needs (Vansteenkiste et al., 2020, 2023). Due to the powerful effect of need (un)fulfillment, people strive toward contexts that fulfill their needs, whereas they avoid contexts that leave them unfulfilled.

While basic physical needs are often considered a unitary construct, BPNT proposes three basic psychological needs: autonomy, competence, and relatedness (Van den Broeck et al., 2016; Vansteenkiste et al., 2020, 2023). Autonomy refers to the need to feel in control of one's life (Legault, 2016). This control includes in-the-moment behavioral decision-making, but it also includes volition over one's broader life trajectory. Competence refers to the need to feel a mastery over valued domains (Slemp et al., 2021). People benefit from feeling that they excel at tasks important to them. Relatedness refers to the need to feel socially connected (Leo et al., 2023). People may feel a desire to be connected with close others (e.g., friends and family), broader social entities (e.g., communities and society), or even more abstract concepts (e.g., history). Studies have repeatedly supported the existence of these three psychological needs (and no others) across cultures (Legault, 2016; Slemp et al., 2021), indicating that a need-based measure of home should reflect these three dimensions – along with basic physical needs. That is, because such a measure operationalizes home by need satisfaction, it should include dimensions that represent the basic physical and psychological needs that can be satisfied.

Further, each need has subdimensions. For instance, autonomy has been conceptualized with separate subdimensions associated with shorter- (e.g., behavioral control) and longer-term (e.g., authenticity) temporality (Al-Khouja et al., 2022; Ryan & Ryan, 2019). It is broadly recognized that not all subdimensions have been identified, but it is also recognized that not all subdimensions are relevant to all contexts (Legault, 2016; Vansteenkiste et al., 2023). Specific subdimensions are relevant to certain contexts, causing these subdimensions to play a greater role while others have a lesser influence. For this reason, it is more important to identify subdimensions relevant to a context of interest rather than attempt to comprehensively identify all possible subdimensions. In identifying relevant subdimensions below, we discuss those associated with Howard's (2025) need-based perspective, as these are most relevant to home.

It should be acknowledged that not all needs equally influence all people, which is recognized in BPNT via need strength (Van den Broeck et al., 2016; Vansteenkiste et al., 2020, 2023). People can be more or less sensitive to needs. For example, while the need for relatedness may be extremely important for some, it may be a lesser priority for others. This suggests that not all needs and their subdimensions are essential to developing a sense of home for all people. For this reason, we not only identify the subdimensions that are broadly important, but we also identify subdimensions that are particularly important for developing a sense of home for certain subsets of people. By doing so, we develop an operationalization that identifies important needs and subdimensions to many subsets of people.

Need-Based Theory of Home

Howard (2025) drew from BPNT to develop a need-based theory of home, interlinking research on housing with this novel theoretical perspective. This perspective recognizes that dwellings and homes are two phenomenologically different concepts, and people attribute stronger meaning to homes than dwellings (Blunt & Dowling, 2022; Easthope, 2004; Parsell, 2012). Howard (2025) argued that need satisfaction is the key differentiating characteristic between dwellings and homes: dwellings are structures that satisfy basic physical needs, whereas homes are dwellings that also satisfy basic psychological needs. While a dwelling may provide physical safety and security, a home also satisfies higher needs that produce greater self-fulfillment and positive well-being. Indeed, the reason that people may have developed distinguishing language between dwellings and homes is the benefits that the latter provide to need satisfaction, and refining more precise language benefits the discovery of home.

Because Howard (2025) proposed that identifying whether a structure satisfies physical and/or psychological needs determines whether it is a dwelling or a home, the dimensions discussed above and their relevant subdimensions are essential in need-based conceptualizations of home. We detail the four needs and their subdimensions associated with home.

Identifying Dimensions and Subdimensions

Basic Physical Needs. Homes must satisfy basic physical needs (Batterham, 2019; Burgess et al., 2023; Howard, 2025; Humphries & Canham, 2021; Nóżka, 2020). A structure that satisfies basic psychological needs but leaves physical needs unfulfilled causes the inhabitant to feel unsafe or insecure, preventing the essential sense of home from developing due to physical need deficiency. For instance, authors have documented that a home can be unmade through violence, both within (e.g., domestic abuse) and outside the dwelling (e.g., armed conflict), although it may still satisfy important basic psychological needs (Jansen & Löfving, 2009; Kofman & Garfin, 2020). In this case, the lack of physical need satisfaction causes the dwelling to no longer be a home. Thus, a need-based measure of home should include the dimension of physical need satisfaction.

Two subdimensions of physical need satisfaction are evident in Howard (2025), drawn from scholarship on home. The first is the most discussed aspect of physical need satisfaction, which we label physical well-being. In discussing the physical need satisfaction of dwellings and homes, authors largely focus on the ability of the structure to provide protection, indicating that satisfying physical needs is a primary attribute of dwellings and homes (Easthope, 2004; Parsell, 2012). The inability to satisfy physical needs has even been discussed in the housing literature as a primary detriment for those living without a dwelling (Batterham, 2019; Burgess et al., 2023; Nicholls, 2010; Nóżka, 2020). The second is implied in discussions of physical need satisfaction, and we label this subdimension as stability. Structures are not considered dwellings or home if they are unable to provide a stable physical space (Howard, 2025). If a structure satisfies physical and psychological needs for a short period of time, inhabitants may begin to feel that the dwelling is a home; however, if the structure begins to be inconsistent in its ability to satisfy physical needs, then it may quickly lose the sense of being a dwelling or a home. This is especially evident for

people living in unstable living conditions, wherein they may only have access to their living arrangements for some of the time (e.g., group housing) (Batterham, 2019; Humphries & Canham, 2021; Nicholls, 2010; Parsell, 2012).

These suggestions indicate that a need-based measure of home should include a physical need dimension, as a home must satisfy basic physical needs. They also suggest that the two dimensions that represent basic need satisfaction should be physical well-being and stability. Thus, we propose the following hypothesis:

Hypothesis 1: The Need-Based Home Scale includes the dimension of physical need satisfaction with the subdimensions of physical well-being and stability.

Autonomy. Even the earliest works on home in the housing literature emphasize its contribution to providing a sense of autonomy (Cooper, 1974; Després, 1991; Harries, 1998). By creating a dividing line between the public and private, dwellings provide the opportunity to control one's domain. Private lives are intimate, in part, because they enable freedom of action, allowing opportunities to perform behaviors that are not permitted in public. In turn, people may develop a sense of home from their dwellings, as they grow to appreciate their freedom. At the same time, removing the control provided by a dwelling can remove the feeling of home. In states of occupation, oppressors often force the privacy of home to become public for the oppressed, serving as a mechanism to monitor and dehumanize (Nowicki, 2014; Porteous & Smith, 2001). Therefore, an important facet of home is the provision of behavioral control in daily action.

Research on BPNT has emphasized that autonomy may also emerge in longer-term manners (Al-Khouja et al., 2022; Clements & Rostosky, 2025; Ryan & Ryan, 2019). While autonomy often relates to the ability to perform behaviors, authors have discussed how autonomy also relates to authenticity. Authenticity is expressed when one's self-presentation aligns with their self-concept, representing a state of control over one's identity (Al-Khouja et al., 2022; Ryan & Ryan, 2019). Not all people have the privilege to live authentically, as they may fear that others will judge their important personal identities (e.g., sexual or gender). By providing a private space, a dwelling can allow inhabitants to become their authentic selves, enabling a longer-term sense of control over their lives. People can also be encouraged to live authentically by their broader community, suggesting that the control provided by a dwelling may not be limited to the dwelling itself. In turn, this deeply personal aspect may cause inhabitants to view their dwellings as home, causing both shorter- and longer-term autonomy to be related to home.

Hypothesis 2: The Need-Based Home Scale includes the dimension of autonomy need satisfaction with the subdimensions of behavioral control and authenticity.

Competence. Media often uses home as a symbol of competence, which reflects the broad acceptance of this notion by consumers of this media (Blunt & Dowling, 2022; Howard, 2025). Television shows regularly include large houses and apartments as signals that a character is successful in their professional career, and novels regularly portray homes as symbols of the characters. As detailed by Barrie (2017), Jane Austen's *Pride and Prejudice* portrays Ms. Bennett as loving Mr. Darcy only after she visits his

home, as she sees its favorable features as representative of him. These examples illustrate that people view a dwelling as an extension of the inhabitants, causing it to be a potential outlet to demonstrate competence. People undergo extensive efforts to flaunt their success via their home, which can be seen in the ubiquity of decorations without function (Easthope, 2004; Mallett, 2004; Parsell, 2012). For these people, a dwelling may become a home when it intimately reflects the inhabitant, as it serves as a display of competence.

People may also develop feelings of home if their dwelling does not accurately reflect them, specifically in cases where their dwelling makes them appear more competent (Blunt & Dowling, 2022; Howard, 2025). Dwellings that inflate positive self-presentation can produce a heightened sense of competence, as the inhabitant may feel that their home demonstrates positive (but inaccurate) characteristics. For instance, a person may purchase a house that they cannot truly afford to appear more successful, and they may reap the need fulfillment of this positive self-image via the symbolic communication of their home. In turn, the person may develop a disproportionate amount of self-worth from their home, as they may believe that few other opportunities enhance their self-worth as much (Crocker & Nuer, 2003). Researchers of housing have even discovered regional differences in the extent that people view their dwellings of reflections of themselves and elicit pride, suggesting cultural differences in competence need strengths associated with dwellings (Preece et al., 2023; Sweaney et al., 2006). Thus, we include these two subdimensions in our need-based operationalization of home, which are associated with competence need satisfaction via accurate reflections and positive presentations.

Hypothesis 3: The Need-Based Home Scale includes the dimension of competence need satisfaction with the subdimensions of personal reflection and positive self-presentation.

Relatedness. Relatedness is among the most discussed needs satisfied by home (Easthope, 2004; Mallett, 2004; Parsell, 2012). Authors have long mused that the people within dwelling are more important than the dwelling itself in developing a sense of home (Blunt & Dowling, 2022; Hareven, 1991; Howard, 2025; Mallett, 2004). Young adults may persist in feeling that their childhood dwelling is their home, in part, because of the love they feel from their parents, although they may no longer spend significant amounts of time in this home (Howard, 2025). When people feel loved by those with which they share a dwelling, they are more likely to perceive a sense of home, and relations with close others may be a primary need associated with relatedness that is associated with home (Bratt, 2002; Mulder, 2006; Mulder & Lauster, 2010).

Feelings of home are impacted by more than those within the dwelling, as communities play a large role in developing these associations (Mallett, 2004; Saegert, 1985). Scholars of housing have long recognized the importance of location in predicting dwelling satisfaction and feelings of home, as geographic proximity to family has been particularly recognized as a primary influence (Karsten, 2007; Kiel & Zabel, 2008; Lee et al., 2008; Mulder & Lauster, 2010). Further, neighborly neighbors can instill a sense of belonging in a broader community, causing inhabitants to feel deeply connected to their dwelling. At the same time, unneighborly neighbors can cause inhabitants to feel unwelcome, producing a disconnect from home (Porteous & Smith, 2001). These

dynamics have been frequently discussed in the housing literature in identifying aspects that determine home, and therefore relations with communities are a second potential need associated with relatedness that may be satisfied in developing a sense of home.

People can feel deep connections with the past. Attachments to family homes are common across cultures, as people may feel a closeness with their ancestors by living where they once lived (Blunt & Dowling, 2022; Howard, 2025). Even more broadly, people may feel a connection to their racial or ethnic history by living in a community with historical ties to their racial or ethnic groups (Blunt & Dowling, 2022; Saegert, 1985). In some cases, people may feel a connection with humanity in general by living in an old home. It is plausible that relatedness with the past could be an essential need satisfied by a dwelling that could develop feelings of home. Thus, we intend for our measure of home to include three subdimensions for relatedness.

Hypothesis 4: The Need-Based Home Scale includes the dimension of relatedness need satisfaction with the subdimensions of close others, community, and history.

Identifying Indicators of Validity

During the scale creation process, it is necessary to demonstrate the validity of the created measure (Hinkin, 1995, 1998). For this reason, it is required to consider which constructs are theoretically associated with the proposed measure, such that the produced relations with these constructs can serve as indicators of validity. In the current article, we discuss potential correlates, antecedents, and outcomes based on their centrality to extant discussions of home (Blunt & Dowling, 2022; Easthope, 2004; Howard, 2025; Parsell, 2012).

First, we test the convergent validity of the NBHS. We adapt a prior need satisfaction measure to create an alternative need-based measure of home, and we create a face-valid sense of home scale (Appendix A). Any need-based measure of home should strongly relate to alternative measures of home, even if derived from a differing theoretical rationale.

Second, more pleasurable living environments have a greater likelihood of producing feelings of home. Prior authors have suggested that the luxuries of houses may yield feelings of home more readily than apartments, especially earlier writings (Cooper, 1974; Després, 1991; Harries, 1998). We expect those living in houses to report stronger feelings of home than those living in apartments. Likewise, the luxury of living with family or alone may yield feelings of home more readily than living with roommates, regardless of the dwelling structure. We expect those living with non-familial roommates to report weaker feelings of home than those living with family or alone. Lastly, dwellings with greater monetary value are more likely to provide capabilities for satisfying needs, as less valuable homes may lack even the basic necessities. We expect the relative value of the dwelling to positively relate to the sense of home.

Third, need satisfaction is associated with positive personal outcomes, and obtaining a sense of home is known to relate to improved well-being (Easthope, 2004; Parsell, 2012). We apply an 18-dimension operationalization of thriving to assess relations of our measure with well-being, as these 18 dimensions represent numerous positive personal outcomes, including positive affect, life satisfaction, and life meaning (Su et al., 2014). These

positive personal outcomes are central in discussions of well-being, whether due to their importance or association with theoretical perspectives that could be linked to home if significant relations are found.

Hypothesis 4: The Need-Based Home Scale positively relates to (a) other indicators of home, (b) relative value of the dwelling, and (c) the dimensions of thriving. (d) People living in houses report greater values on the Need-Based Home Scale than those living in apartments, and (e) people living with family or alone report greater values on the Need-Based Home Scale than those living with roommates.

Scale Development Process

We undergo a multiple-study scale development process to create a multidimensional need-based measure of home, and we closely follow established scale development guidelines (Clark & Watson, 2019; DeVellis & Thorpe, 2021; Goretzko et al., 2021; Hinkin, 1995, 1998; Howard, 2018, 2025; Howard & Henderson, 2023; Howard & O'Sullivan, 2024; Jebb et al., 2021; Loewenthal & Lewis, 2020; Presser & Blair, 1994; Willis, 2016). In Study 1, we perform a qualitative investigation to assess whether our need-based conceptualization of home is sufficiently comprehensive, which can support the content validity of the resultant measure. The qualitative responses are also used to develop an over-representative item list to be subsequently reduced. In three pilot studies (Appendix A), we assess the psychometric properties of the over-representative item list via exploratory factor analysis (EFA), which reduces it into a more concise measure. We also assess the psychometric properties of other adapted and created scales subsequently used to test the convergent validity of our created measure. In Study 2, we confirm the psychometric properties of our scale via confirmatory factor analysis (CFA), which we then label the Need-Based Home Scale (NBHS). In Study 3, we test the convergent validity of the NBHS using the adapted and created measures from our pilot studies. In Study 4, we test the concurrent validity of the NBHS by assessing its relations with theoretically relevant constructs, which are important antecedents and outcomes. Together, these studies provide robust insights into the capability of the NBHS to assess feelings of home via need satisfaction.

Institutional Review Board permission of the primary authors' institution was granted for each study, and all studies were conducted in accordance with the Helsinki Declaration. The data analyzed in all seven studies can be found at the following Open Science Framework link: https://osf.io/eyrgv/?view_only=fbe9f535d9254ed8abfbdc72df544a65. All studies utilized Prolific as the sampling source, through which participants were provided monetary compensation for their time. Prolific is an online platform that connects those needing tasks completed, such as taking a survey, with those willing to complete those tasks. Research has repeatedly supported the validity of results obtained via samples collected from Prolific (Albert & Smilek, 2023; Palan & Schitter, 2018; Stanton et al., 2022). When recruiting participants, we explicitly designed the studies in Prolific to exclude participants who had participated in prior studies. By doing so, we prevented any participant from participating in multiple studies, ensuring the independence of our samples. Lastly, all studies utilized the same procedure. Participants enrolled via the Prolific platform and immediately completed the survey.

Study 1 – Qualitative Investigation

To begin our scale development process, we performed a qualitative investigation to assess whether the proposed dimensions were sufficiently representative, which provides support for the content validity of any measure derived from this conceptualization. Our purpose is not to demonstrate that each dimension is commonly identified as a necessary need to develop a sense of home, as some needs may be extremely important to only a subset of people. Instead, our purpose is to ensure that no need is excluded from our multidimensional conceptualization.

Study 1 Method

Study 1 Participants

We recruited a total of 200 participants with the following demographic characteristics: $Age_{\bar{x}} = 37.03$, $Age_{S.D.} = 12.07$, 59% female. Participants were located in: 51% United States, 19% Canada, 13% United Kingdom, 7% Chile, 10% other.

Study 1 Measures

We adapted two items from prior guides and articles that used a qualitative methodology to begin their scale development process (Howard, 2018; Presser & Blair, 1994; Willis, 2016). The first item stated, "It is widely recognized that not all places of residence are considered home. For instance, the popular cliche, "a house is not a home," emphasizes that home is more than just a place of residence. In the space below, please list three attributes that you believe causes a residence to feel like a home for yourself." The second item stated, "In the space below, please list three attributes that you believe causes a residence to feel like a home for other people." These two questions utilized different referents due to social desirability biases and the fundamental attribution error (Harvey et al., 1981; Tetlock, 1985). People are more likely to provide answers to make themselves appear in a positive light when answering regarding themselves, whereas they are more likely to provide more negative answers when answering regarding others (whether consciously or subconsciously). By asking about both referents, we ensure that our qualitative investigation contains more accurate and a wider range of responses.

Study 1 Results

We utilized a thematic coding process to interpret the qualitative responses, wherein we categorized each participant response into a specified category. Our identified dimensions were included as initial categories, along with the dimensions of Other. Any responses categorized as Other were subsequently reviewed to determine whether they represented an unidentified need that needed to be accounted for developing a sense of home.

Table 2 provides the frequencies of responses for each category. A sizable number of participants provided responses associated with each need, with the exception of Positive Self-Presentation. As mentioned above, this dimension is included because it was deemed to be theoretically important for certain subsets of people. When inspecting the Other category, most responses were outcomes of home based on the applied

Table 2. Frequencies of qualitative responses in coded categories.

	Home for oneself	Home for others
Behavioral Control	18%	32%
Authenticity	8%	5%
Reflection	21%	15%
Positive Self-Presentation	1%	2%
Close Others	61%	57%
Community	10%	15%
History	21%	22%
Physical Well-Being	68%	74%
Stability	8%	7%
Other	12%	7%

Note. Figures indicate the percentage of participant qualitative responses that represented the subdimension specified in the first column. Home for Oneself indicates needs that participants indicated were important for their own sense of home, whereas Home for Others indicates needs that participants indicated were important for others' sense of home.

conceptualization, indicating that these responses should not be considered dimensions. The remaining responses were too vague to be meaningfully interpreted, again suggesting that they should not be added. Therefore, it was determined that the proposed dimensions of home are sufficiently comprehensive.

Study 1 Discussion

Study 1 supported that no additional dimensions need to be incorporated into our need-based conceptualization of home, supporting the content validity of our conceptualization. It also demonstrated that people often recognize our proposed dimensions as needs that must be satisfied to develop a sense of home, further supporting that validity of our conceptualization. With this initial supportive evidence, we continue our scale development process.

Pilot Studies – Item Development and Exploratory Factor Analysis

Following our qualitative investigation, we developed an initial over-representative item list for our operationalization of home. This process is recommended by scale development guides, as it helps ensure the content validity of the final measure. It also does not detract from the construct validity of the final measure, as items are iteratively removed during the scale development process. To create these items, we closely adhered to prior theorizing on the need-based approach to conceptualizing home, but we also adapted items from participants' qualitative responses in Study 1. That is, some responses closely reflected our intended operationalization of certain dimensions, and we modified the participant responses to create adequate items.

Because developing a need-based operationalization of home is a novel endeavor, we conducted a series of pilot studies to investigate the psychometric properties of our over-representative item list, which were likewise used to reduce the item list. We also utilized this process to explore the psychometric properties of other measures necessary to test the validity of our scale. Appendix A provides a full report of these pilot studies.

The results of our pilot studies reduced our over-representative item list to a 36-item measure with 4 items for each of our 9 dimensions. We followed modern recommended practices in conducting our EFA (Goretzko et al., 2021; Hinkin, 1995, 1998; Howard &

Henderson, 2023; Howard & O'Sullivan, 2024), which supported our proposed dimensionality without problematic cross-loadings. Our pilot studies also found that our first adapted indicator of convergent validity did not produce adequate psychometric properties, whereas our second attempt produced the intended factor structure. This finding underscores the need to assess the psychometric properties and validity of all new measures, even if adapted from prior sources. With this support demonstrated, we continue to test our reduced item list.

Study 2 – Confirmatory Factor Analysis

The goal of Study 2 is to confirm the psychometric properties of our reduced item list via CFA. In doing so, we assess whether the proposed nine-dimension structure is supported.

Study 2 Method

Study 2 Participants

We initially recruited 411 participants, but 8 were removed for failing more than one of two attention checks. The final sample included a total of 403 participants with the following demographic characteristics: $Age_{\bar{x}} = 32.57$, $Age_{S.D.} = 9.96$, 54% female. Participants were located in: 44% South Africa, 9% Poland, 8% Portugal, 5% United Kingdom, 35% Other. In the Other category, no country accounted for more than 4% of the total sample.

Study 2 Measures

Reduced Item List. We administered the reduced 36-item list developed in Study 1 and our pilot studies.

Study 2 Results

In conducting our CFA, we followed modern recommended practices (Goretzko et al., 2024; Howard et al., 2025; Nye, 2023). We tested three separate models. The first modeled nine intercorrelated factors without any second-order factors. The second modeled nine first-order factors with four intercorrelated second-order factors. The third modeled nine first-order factors, four second-order factors, and one third-order factor. This third model aligned most closely with our theoretical rationale, and support for this model would suggest that home could be studied via either the nine separate dimensions, the four separate second-order factors, or the one overarching third-order factor. We utilized the following cutoffs to interpret model fit indices: CFI $\geq$ .95, TLI $\geq$ .95, SRMR $\leq$.05, RMSEA $\leq$ .05 (Goretzko et al., 2024; Howard et al., 2025; Nye, 2023). We also inspected AIC and BIC values to derive relative comparisons of model fit.

The model fit for the first model was: CFI = .95, TLI = .94, SRMR = .04, RMSEA = .06, AIC = 1.531, BIC = 1.963. The model fit of the second model was: CFI = .94, TLI = .94, SRMR = .05, RMSEA = .06, AIC = 1.562, BIC = 1,910. The model fit of the third model was: CFI = .94, TLI = .94, SRMR = .06, RMSEA = .06, AIC = 1.573, BIC = 1.912. The first

four fit indices (CFI, TLI, SRMR, and RMSEA) were largely indistinguishable between the models, with values only differing between .00 and .02. The AIC values suggested that the first model performed better than the latter two models, whereas the latter two models were largely indistinguishable. The BIC values suggested that the latter two models performed better than the first model, and the latter two models were largely distinguishable. These results indicate that any of the models could be reasonably chosen based on their relative model fit indices, and they indicate that each model produces fit indices that meet or closely approach our specified cutoffs. For these reasons, we chose to interpret the third model based on its relative theoretical strengths.

Table 3 provides the factor loadings of the items. Each item loaded above .70 onto its posited factor. Table 4 provides the loadings of the first-order factors onto their respective second-order factors. Each first-order factor loaded above .65 onto its respective second-order factor. Table 4 also provides the loadings of the second-order factors onto the third-order factor. Each second-order factor loaded at .79 or above onto the third-order factor. These results provide strong support for the theoretical association between the items, first-order factors, second-order factors, and the third-order factor. The composite reliability of each first-order factor was .88 or above, and the average variance extracted of each first-order factor was .63 or above. No hetero-trait mono-trait ratio exceeded .90. Each of these results strongly exceed standard cutoffs for these statistics in the present literature, providing strong confirmatory support for the proposed factor structure of our developed operationalization.

Table 5 provides the Cronbach's alphas for Studies 2, 3, and 4. The total scale, each dimension, and each subdimension consistently produced Cronbach's alphas that exceeded standard cutoffs ($>$.80), further supporting the psychometric properties of our created scale. Our Pilot Studies and Study 2 support Hypotheses 1, 2, 3, and 4.

Study 2 Discussion

Study 2 provided robust confirmatory support for the psychometric properties of our reduced item list. With this significant support provided, we henceforth label this reduced 36-item list as the Need-Based Home Scale (NBHS).

Study 3 – Convergent and Concurrent Validity

In Study 3, we assess the convergent and concurrent validity of the NBHS. We utilize the measures that were supported via our pilot studies (Appendix A).

Study 3 Method

Study 3 Participants

We initially recruited 101 participants, but 3 were removed for failing more than one of four attention checks. The final sample included a total of 98 participants with the following demographic characteristics: $Age_{\bar{x}} = 29.58$, $Age_{S.D.} = 8.45$, 46% female. Participants were located in: 33% South Africa, 16% Poland, 11% United Kingdom, 8% Portugal, 8% Italy, 24% Other. In the Other category, no country accounted for more than 4% of the total sample.

Table 3. Confirmatory factor analysis first-order factor loadings.

	1	2	3	4	5	6	7	8	9
1. Beh. Control 1	.74								
2. Beh. Control 2	.86								
3. Beh. Control 3	.85								
4. Beh. Control 4	.71								
5. Authenticity 1		.79							
6. Authenticity 2		.84							
7. Authenticity 3		.88							
8. Authenticity 4		.89							
9. Reflection 1			.89						
10. Reflection 2			.90						
11. Reflection 3			.94						
12. Reflection 4			.82						
13. Pos. Present 1				.87					
14. Pos. Present 2				.92					
15. Pos. Present 3				.93					
16. Pos. Present 4				.80					
17. Close Others 1					.84				
18. Close Others 2					.89				
19. Close Others 3					.92				
20. Close Others 4					.94				
21. Community 1						.87			
22. Community 2						.93			
23. Community 3						.91			
24. Community 4						.83			
25. History 1							.86		
26. History 2							.92		
27. History 3							.94		
28. History 4							.91		
29. Phys. W-B 1								.82	
30. Phys. W-B 2								.83	
31. Phys. W-B 3								.86	
32. Phys. W-B 4								.86	
33. Stability 1									.87
34. Stability 2									.81
35. Stability 3									.88
36. Stability 4									.90

Note. Beh. Control = Behavioral Control; Pos. Present = Positive Self-Presentation; Phys. W-B = Physical Well-Being. Figures indicate the factor loadings of items onto their respective third-order factors.

Table 4. Confirmatory factor analysis second- and third-order factor loadings.

	Autonomy	Competence	Relatedness	Physical
1. Behavioral Control	.88			
2. Authenticity	.91			
3. Positive Self-Presentation		.95		
4. Reflection		.88		
5. Close Others			.87	
6. Community			.91	
7. History			.65	
8. Physical Well-Being				.99
9. Stability				.72
Sense of Home	.96	.95	.79	.79

Note. Figures in first nine rows indicate the factor loadings of the third-order factors onto their respective second-order factors. Figures in bottom row indicate the factor loadings of the second-order factors onto the first-order factor.

Study 3 Measures

Need-Based Home Scale

We administered the created 36-item, 9-dimension NBHS.

Table 5. Cronbach's alphas of the needs-based home scale.

	Study 2	Study 3	Study 4
1. Beh. Control	.87	.88	.83
2. Authenticity	.91	.93	.92
3. Reflection	.94	.96	.94
4. Pos. Present	.93	.90	.91
5. Close Others	.94	.95	.93
6. Community	.94	.95	.91
7. History	.95	.91	.93
8. Phys. W-B	.91	.91	.79
9. Stability	.92	.93	.89
10. Autonomy	.92	.95	.92
11. Competence	.95	.95	.94
12. Relatedness	.94	.95	.94
13. Physical	.92	.94	.89
14. Home	.97	.97	.96

Note. Beh. Control = Behavioral Control; Pos. Present = Positive Self-Presentation; Phys. W-B = Physical Well-Being.

Alternative Need-Based Measure of Home

We administered a 13-item, 3-dimension alternative need-based home scale tested in our pilot studies. This measure was adapted from the Work-Related Basic Need Satisfaction Scale (Dysvik et al., 2013), wherein all references to work were replaced with references to one's residence. For instance, the item, "I feel like I can be myself at my job," was adapted to, "I feel like I can be myself at my residence." This measure was adapted due to prior psychometric and validity support, and our pilot studies supported the psychometric properties of the adapted scale. Each dimension produced a Cronbach's alpha of .83 or greater (Appendix B).

Unidimensional Measure of Home

We administered a unidimensional, 4-item measure of home, which was tested in our pilot studies. Our pilot studies supported its psychometric properties of this face-valid measure via EFA and CFA, and an example item is, "My residence feels like home to me." The Cronbach's alpha of the scale was .93 (Appendix C).

Study 3 Results

Table 6 provides the correlations of the NBHS and the indicators of convergent and concurrent validity. Each interrelation was strong ($r = .37–.75$, $p < .01$), supporting the scale's concurrent validity. The convergent validity correlations were particularly strong. The correlation of the NBHS's autonomy dimension and the alternative measure's autonomy dimension was .68 ($p < .01$), the correlation of the two competence dimensions was .54 ($p < .01$), and the correlation of the two relatedness dimensions was .72 ($p < .01$). The weakest of these, the competence correlations, likely reflect the differing conceptualizations of competence. The NBHS conceptualization reflects competence reflected by the dwelling, whereas the alternative conceptualization reflects the competence felt when within the dwelling. When paired with the strong correlations of the other pairings, these results support the convergent validity of the NBHS. The total NBHS score correlated strongly with the total score of the alternative measure ($r = .81$, $p < .01$) and the unidimensional measure of home ($r = .66$, $p < .01$). These strong correlations support the convergent validity of the NBHS. Study 3 supports Hypothesis 4a.

Table 6. Correlations of Study 3.

	Convergent and concurrent validity scales				
NBHS	Autonomy	Competence	Relatedness	Home[a]	Home[b]
1. Beh. Control	.64	.63	.49	.67	.55
2. Authenticity	.65	.68	.60	.74	.63
3. Reflection	.53	.41	.42	.52	.40
4. Pos. Present	.58	.62	.54	.67	.46
5. Close Others	.57	.63	.75	.75	.65
6. Community	.58	.49	.64	.66	.50
7. History	.43	.40	.54	.53	.48
8. Phys. W-B	.54	.65	.45	.63	.59
9. Stability	.38	.55	.37	.50	.42
10. Autonomy	**.68**	.69	.57	.74	.62
11. Competence	.58	**.54**	.50	.62	.45
12. Relatedness	.60	.57	**.72**	.73	.61
13. Physical	.50	.64	.44	.61	.55
14. Home	.71	.72	.68	**.81**	**.66**

Note. Beh. Control = Behavioral Control; Pos. Present = Positive Self-Presentation; Phys. W-B = Physical Well-Being. All relations $p < .01$. Correlations in bold indicate convergent validity correlations.
[a]Indicates adapted three-dimension home scale.
[b]Indicates unidimensional face-valid home scale.

Study 3 Discussion

The results of Study 3 supported the convergent and concurrent validity of the NBHS. Each dimension produced very strong relations with dimensions of the same conceptualization as gauged by alternative measures, supporting the convergent validity of these dimensions. Each dimension also produced strong relations with the other representations of home, supporting the concurrent validity of these dimensions. Thus, these results support the NBHS.

Study 4 – Concurrent Validity

In Study 4, we explore the broader nomological network of the NBHS. In doing so, we test the concurrent validity of the scale, and we provide initial evidence for its relations with important antecedents and outcomes. We assess the relation of the NBHS with indicators of dwelling quality (as antecedents) and the dimensions of thriving (as outcomes).

Study 4 Method

Study 4 Participants

We initially recruited 203 participants, but 2 were removed for failing more than two of six attention checks. The final sample included a total of 201 participants with the following demographic characteristics: $Age_{\bar{x}} = 32.68$, $Age_{S.D.} = 11.08$, 51% female. Participants were located in: 43% South Africa, 11% Poland, 9% Portugal, 9% United Kingdom, 6% Canada, 22% Other. In the Other category, no country accounted for more than 4% of the total sample.

Study 4 Measures

Need-Based Home Scale. We administered the created 36-item, 9-dimensional NBHS created in our prior studies.

Thriving. We administered the Comprehensive Inventory of Thriving (Su et al., 2014), which is a 54-item, 18-dimension measure. These dimensions include life satisfaction, life meaning, and positive feelings. An example item is, "What I do in life is valuable and worthwhile" (Self-Worth). The authors of this scale provided significant evidence for its psychometric properties and validity. The Cronbach's alpha of each dimension was .76 or greater.

Relative Cost of Dwelling. We administered three face-valid items to represent the relative cost of the participant's dwelling. These items read, "Compared to typical residences in your area, how expensive is your residence?", "How expensive is your residence compared to other residences in your state, providence, or similar geographic designation?", and, "How expensive is your residence compared to other homes in your country?" Responses ranged from 1 (Much cheaper than other residences) to 7 (Much more expensive than other residences). Their Cronbach's alpha was .81.

Type of Dwelling. We administered the following question, "What type of structure is your residence?" Participants could respond: House, Apartment, Townhome, Condo, or Other. The latter three options were not included in analyses for this question, as we were focused on the comparison of houses and apartments. This resulted in the removal of 11 responses for this item.

Living with Roommate(s). We administered the following question, "Do you live alone, with family, or with roommates that are not family?" Response options were: "I live alone," "I live with family," "I live with roommates that are not my family," and "I live with both family and roommates that are not family." We coded the first two responses as not living with roommates, whereas we coded the second two responses as living with roommates.

Study 4 Results

We tested the relation of the NBHS with potential antecedents. The NBHS total score significantly related to the relative cost of the dwelling ($r = .15$, $p < .05$), but none of the dimensions or subdimensions produced statistically significant relations ($r = .06$–$.14$, all $p > .05$). To perform our comparative analyses, we conducted a series of t-tests presented in Tables 8 and 9. The comparison of the NBHS total score between those who lived in a house ($\overline{x} = 5.72$, *S.D.* $= .86$) or an apartment ($\overline{x} = 4.86$, *S.D.* $= .90$) was statistically significant ($p < .01$). Each of the dimension and subdimension comparisons were also statistically significant (all $p < .01$). The comparison of the NBHS total score between those who lived with ($\overline{x} = 4.94$, *S.D.* $= .93$) and without roommates ($\overline{x} = 5.37$, *S.D.* $= .94$) was statistically significant ($p = .05$). No dimensions produced significant differences in this comparison (all $p > .05$), whereas two subdimensions produced a statistically significant difference (both $p < .05$). These results indicate that the NBHS relates to relevant antecedents, supporting Hypothesis 4b, 4d, and 4e.

Table 7 provides the correlations of the NBHS with the dimensions of thriving. The average correlation of the total NBHS score with the positive-coded thriving dimensions was .56 (15 of 15 with $p < .05$), and the average correlation of the total NBHS score with the negative-coded thriving dimensions was −.37 (3 of 3 with $p < .05$). The average correlation of the NBHS dimensions with the positive-coded thriving dimensions was .45 (60 of 60 with $p < .05$), and the average correlation of the NBHS dimensions with the negative-coded thriving dimensions was −.32 (10 of 12 with $p < .05$). The average correlation of the NBHS subdimensions with the positive-coded thriving dimensions was .41 (133 of 135 with $p < .05$), and the average correlation of the NBHS subdimensions with the negative-coded thriving dimensions was −.30 (24 of 27 with $p < .05$). Together, these results support that the NBHS significantly relates to the dimensions of thriving. These results support Hypothesis 4c (Tables 8 and 9).

Study 4 Discussion

Study 4 demonstrated that the NBHS relates to theoretically important antecedents and outcomes as expected. The scale produced robust relations with the dimension of thriving, including life satisfaction and meaning. The scale produced significant relations with indicators of dwelling quality. In all, these results provide strong support for the validity of the NBHS.

General Discussion

Recent authors have observed that psychological research often neglects the concept of home, despite its known importance to psychological well-being (Howard, 2025; Soleimani & Gharehbaglou, 2023). A potential reason for this dearth is the lack of a measure derived from a conceptualization of home entrenched in psychological theory. The goal of the current article was to remove this barrier from the current literature and create a need-based operationalization of home. By heeding the call of prior authors, we produce significant theoretical insights and avenues for future research within both psychology and the many fields that study housing.

Via a seven-study process, we produced the NBHS. Our qualitative study demonstrated that the proposed dimensions of the NBHS were sufficiently comprehensive in identifying the prerequisite needs satisfied by home, as all needs discussed by participants were represented in our multidimensional framework. Our subsequent quantitative studies provided further support for the dimensional structure of our measure, via the application of both EFA and CFA. These studies supported the convergent validity of the NBHS by demonstrating its relations of measures representing the same concept, but these relations also showed that the measure is not repetitive with these alternative operationalizations. We also supported the concurrent validity of the NBHS by demonstrating its relations with relevant correlates, antecedents, and outcomes. Of potential antecedents and outcomes, we found that the NBHS produced significant relations with many indicators of dwelling quality, and we also found that the NBHS produced robust relations with the many dimensions of thriving. In all, our seven studies provide significant support for the psychometric properties and validity of the NBHS, indicating that it is suitable for future empirical studies. These results provide several implications and directions for future research.

Table 7. Correlations of Study 4.

	Behavioral Control	Authenticity	Reflection	Positive Self-Presentation	Close Others	Community	History	Physical Well-Being	Stability	Autonomy	Competence	Relatedness	Physical	Home
Relative Cost	.09	.06	.11	.14	.12	.11	.12	.10	.14	.08	.13	.14	.13	.15*
Support	.27**	.31**	.20**	.35**	.47**	.32**	.23**	.54**	.51**	.31**	.29**	.38**	.58**	.45**
Community	.35**	.44**	.43**	.50**	.46**	.65**	.69**	.25**	.14	.43**	.50**	.71**	.21**	.63**
Trust	.36**	.45**	.43**	.39**	.26**	.41**	.42**	.31**	.21**	.44**	.44**	.43**	.29**	.50**
Respect	.42**	.36**	.35**	.43**	.32**	.30**	.32**	.47**	.53**	.43**	.42**	.37**	.54**	.51**
Loneliness	−.40**	−.37**	−.27**	−.36**	−.35**	−.34**	−.25**	−.32**	−.31**	−.41**	−.34**	−.35**	−.35**	−.43**
Belonging	.42**	.46**	.48**	.60**	.43**	.60**	.53**	.35**	.20**	.47**	.58**	.61**	.30**	.63**
Engagement	.26**	.23**	.31**	.47**	.39**	.46**	.40**	.41**	.30**	.26**	.42**	.49**	.39**	.49**
Mastery Skills	.37**	.41**	.48**	.57**	.44**	.45**	.52**	.35**	.26**	.42**	.56**	.55**	.33**	.59**
Learning	.22**	.13	.19**	.29**	.24**	.30**	.31**	.28**	.24**	.18**	.26**	.33**	.29**	.33**
Accomplishment	.41**	.45**	.42**	.65**	.49**	.48**	.52**	.39**	.24**	.46**	.57**	.58**	.35**	.62**
Self-Efficacy	.47**	.39**	.29**	.51**	.42**	.45**	.37**	.45**	.41**	.45**	.43**	.48**	.48**	.55**
Self-Worth	.45**	.47**	.41**	.56**	.43**	.55**	.50**	.44**	.36**	.49**	.52**	.58**	.44**	.63**
Lack of Control	−.20**	−.21**	−.03	−.14*	−.15*	−.13	−.00	−.29**	−.36**	−.22**	−.09	−.10	−.35**	−.19**
Meaning & Purpose	.44**	.42**	.37**	.56**	.44**	.53**	.48**	.44**	.32**	.46**	.50**	.56**	.42**	.60**
Optimism	.46**	.39**	.32**	.58**	.41**	.49**	.36**	.44**	.37**	.45**	.48**	.48**	.45**	.56**
Life Satisfaction	.49**	.48**	.50**	.64**	.44**	.51**	.47**	.38**	.28**	.52**	.61**	.55**	.36**	.64**
Positive Feelings	.55**	.54**	.45**	.60**	.47**	.54**	.49**	.47**	.31**	.59**	.56**	.58**	.43**	.67**
Negative Feelings	−.47**	−.43**	−.34**	−.43**	−.30**	−.30**	−.28**	−.41**	−.30**	−.48**	−.41**	−.34**	−.39**	−.48**

Note. Need-Based Home Scale subdimensions, dimensions, and total score represented by columns. Relative cost of dwelling and dimensions of thriving represented by rows. *$p < .05$; **$p < .01$.

Table 8. Comparison of NBHS scores by residence type (house or apartment).

	$\bar{x}$ of House	SD of House	$\bar{x}$ of Apartment	SD of Apartment	t
1.) Behavioral Control	5.86	.83	5.25	1.23	4.08**
2.) Authenticity	5.82	1.14	5.07	1.36	4.14**
3.) Positive Self-Presentation	5.30	1.35	4.53	1.49	3.65**
4.) Reflection	5.52	1.27	4.78	1.33	3.84**
5.) Close Others	5.72	1.23	4.96	1.31	4.05**
6.) Community	5.24	1.43	4.31	1.38	4.40**
7.) History	4.73	1.68	3.72	1.79	3.90**
8.) Physical Well-Being	5.91	.79	5.52	.92	3.13**
9.) Stability	6.30	.72	5.91	.99	3.09**
10.) Autonomy	5.84	.92	5.16	1.20	4.42**
11.) Competence	5.41	1.23	4.66	1.28	4.05**
12.) Relatedness	5.23	1.22	4.33	1.26	4.87**
13.) Physical	6.11	.67	5.72	.88	3.44**
14.) Home	5.60	.86	4.89	.90	5.39**

Note. Columns indicate whether participants were currently residing in a house or apartment. The final column reports the t-statistics for the t-test comparing those living in a house or apartment for the Need-Based Home Scale subdimension, dimension, or total score indicated by the row. $^{**}p < .01$.

Table 9. Comparison of NBHS scores by living with(out) roommates.

	$\bar{x}$ of no roommates	SD of no roommates	$\bar{x}$ of with roommates	SD of with roommates	t
1.) Behavioral Control	5.66	1.03	5.37	1.09	1.21
2.) Authenticity	5.60	1.24	4.93	1.36	2.33*
3.) Positive Self-Presentation	5.08	1.44	4.46	1.42	1.85
4.) Reflection	5.29	1.34	4.86	1.47	1.37
5.) Close Others	5.47	1.31	5.19	1.44	.92
6.) Community	4.94	1.50	4.33	1.11	1.81
7.) History	4.42	1.79	3.58	1.79	2.02*
8.) Physical Well-Being	5.76	.89	5.62	.83	.70
9.) Stability	6.16	.86	6.11	.73	.28
10.) Autonomy	5.63	1.06	5.15	1.14	1.95
11.) Competence	5.18	1.29	4.66	1.30	1.75
12.) Relatedness	4.94	1.33	4.37	1.09	1.91
13.) Physical	5.96	.80	5.86	.71	.55
14.) Home	5.37	.94	4.94	.93	2.01*

Note. Columns indicate whether participants were currently living with or without roommates who are not family. The final column reports the t-statistics for the t-test comparing those living with or without roommates who are not family for the Need-Based Home Scale subdimension, dimension, or total score indicated by the row. $^{*}p < .05$.

Theoretical Implications

The Study of Home

A multitude of conceptualizations have been created for home in the housing literature, resulting in extensive discussions on how the concept should be defined (Blunt & Dowling, 2022; Easthope, 2004; Parsell, 2012). Although no conceptualization can be definitively declared correct, the need-based approach to conceptualizing home represents a promising approach to advancing this academic conversation. Howard (2025) provided significant theoretical support by interlinking present theorizing on home with BPNT, indicating that the need-based approach is capable of integrating the literature on home. Soleimani and Gharehbaglou (2023) provided initial empirical support for the need-based approach by showing that need satisfaction may represent feelings of home. Now, the current study provided robust evidence that home can be operationalized by the structure proposed by Howard (2025), which specified the dimensions and subdimensions of need satisfaction to represent either a dwelling (physical need satisfaction) or a home (physical and psychological need satisfaction). Our study also demonstrated

that this operationalization relates to the antecedents and outcomes expected from a measure of home. This cumulative evidence not only supports the validity of our developed operationalization but also supports the validity of the need-based approach to the study of home.

A benefit of the need-based approach to home is the integration of perspectives in the housing studies literature (Howard, 2025). While many arguments have been provided for the attributes that cause a dwelling to become a home, the representative characteristics often lacked a unifying rationale to justify their inclusion (and the exclusion of other characteristics). The need-based approach argues that these dimensions are representative of home because they satisfy essential needs, providing a unifying mechanism. Future researchers should leverage this mechanism to draw linkages between different – and perhaps competing – perspectives on home. Discussions on home regularly consider specific characteristics in isolation, such as the capability of the home to provide autonomy (Cooper, 1974; Després, 1991; Harries, 1998) or represent the self (Easthope, 2004; Mallett, 2004; Parsell, 2012). By adopting the need-based approach, researchers can recognize that these characteristics cannot be considered in isolation. Integrative and interdisciplinary models must be adopted to specify how these characteristics work together to develop a sense of home. In doing so, presently unrecognized relations between these characteristics may be discovered, producing novel empirical insights.

Further, the development of a psychometrically sound measure with significant validity evidence hastens and enhances the accuracy of future studies (Flake & Fried, 2020; Hinkin, 1995, 1998; Jebb et al., 2021). Researchers should integrate theoretical lenses in the housing studies literature to test both novel and extant proposals. Authors have identified a multitude of attributes that may cause a dwelling to be (un)homely (Jansen & Löfving, 2009; Kofman & Garfin, 2020; Nowicki, 2014; Porteous & Smith, 2001), which may be potential antecedents to the need satisfaction by a dwelling. Many of our participants' qualitative responses considered home to include objects important to them, and we associated these objects with specific needs. For instance, we considered family heirlooms passed throughout generations to be representative of the History subdimension. Future researchers can apply the need-based approach to home in an object-oriented investigation to empirically determine the mechanisms that cause these objects to produce an (un)homely environment. In doing so, researchers can not only support the proposals of prior authors, but they can also provide theoretical support for the explanatory mechanisms (e.g., mediators) that cause these objects to produce feelings of home.

Additionally, many authors have discussed the importance of understanding domicide and how home can be unmade (Nowicki, 2014; Porteous & Smith, 2001). The NBHS provides a novel avenue to investigate these phenomena. Home may be unmade through the frustration of basic needs that were once satisfied. For instance, these discussions have regularly highlighted how home may be unmade through the loss of a loved one, as the dwelling may no longer feel like a familiar place to the inhabitant without their co-inhabitants (Nowicki, 2014; Porteous & Smith, 2001). Through the lens of the need-based approach, this unmaking of home may occur due to the frustration of relatedness needs that were once satisfied. Similarly, authors have noted how the loss of physical capabilities may remove the sense of home, as the dwelling may no longer be conducive

to basic physical necessities (Nowicki, 2014; Porteous & Smith, 2001). For example, a person who loses the ability to walk may feel that their dwelling with stairs is unable to provide the essentials for living, especially if bedrooms are located on the second floor. In this case, the loss of basic physical need satisfaction may likewise remove the sense of home. Now that a measure exists to assess the home via need satisfaction, these theoretical proposals can be empirically tested, leading to a rich stream of future quantitative research on home.

BPNT and Home

Our need-based conceptualization of home (Howard, 2025) was adapted from BPNT (Van den Broeck et al., 2016; Vansteenkiste et al., 2020, 2023). Because our results provided significant support for the validity of our measure developed from this theoretical perspective, our results also provide significant support for the validity of this broader perspective in understanding other aspects of home. That is, because we supported that home can be operationalized through need satisfaction, we also support that additional aspects of home may be understood through the lens of need satisfaction. We call on future researchers to test whether the broader tenets of BPNT are applicable to the study of home.

We recommend that researchers should apply the nine key criteria of basic psychological needs in BPNT to the concept of home (Vansteenkiste et al., 2020). Several of these criteria were discussed in Howard (2025) and our application above. For instance, BPNT proposes that psychological needs are content-specific, such that the satisfaction and frustration of basic psychological needs produce specific processes and behaviors, which are represented in language due to their inherent importance (Vansteenkiste et al., 2023). The need-based approach to home argues that humans developed distinct words for dwelling and home due to the importance of these concepts to need satisfaction, aligning with this key criterion of BPNT.

Future researchers should similarly expand upon the key criteria for psychological needs to better understand home, both theoretically and empirically. BPNT proposes that needs are universal (Van den Broeck et al., 2016; Vansteenkiste et al., 2020, 2023). While some people may be more or less affected by certain needs due to their need strength, they should be affected by all needs to some extent. Future researchers should perform cross-cultural studies to assess whether all needs are indeed important to all groups of people for developing a sense of home. Such an investigation would provide empirical support for whether BPNT can broadly explain the dynamics of home, but it may also identify gaps in the theory's applicability. In doing so, cross-cultural investigations could also extend ongoing conversations in the housing literature by incorporating the theoretical nuance of the need-based approach to home. Namely, authors have discovered regional differences in the extent that people view their dwellings as reflections of themselves and elicit pride (Preece et al., 2023; Sweaney et al., 2006). These observations may reflect cultural differences in competence need strengths associated with dwellings, which may be explained by extant theoretical perspectives regarding cultural associations with the development of need strengths that produce regional differences (Deci et al., 2017; Ryan & Deci, 2024; Van den Broeck et al., 2016). In turn, it may be these regional differences in need strengths that also produce differences in how people view their dwellings.

Likewise, Vansteenkiste et al. (2023) map each of the nine criteria into a comprehensive model, distinguishing the manners in which needs emerge, are influenced by

antecedents, and impact outcomes. For example, they argue that the pervasiveness of needs leads to their broad impact on personal outcomes, suggesting that need-based experiences should relate to cognitive, affective, and behavioral outcomes that surface in both psychological and biological manners. Future researchers should adapt this model to frame their studies, as we provided evidence that the centrality of home may be due to its need satisfaction. In doing so, researchers could provide more nuanced arguments for the relations of home, such as the consideration that home may relate to improved physiobiological indicators, resulting in interdisciplinary models and theories.

Additionally, BPNT is subsumed in self-determination theory (SDT) (Deci et al., 2017; Deci & Ryan, 2012; Ryan & Deci, 2024). SDT is a meta-theory of motivation, and BPNT is one of six mini-theories. With initial support provided for BPNT, our results provide justification to test whether SDT is applicable to the study of home. Of the six mini-theories of SDT, cognitive evaluation theory is the most popular (Koestner & Levine, 2023), and it identifies how contexts and events relate to human motivation via their association with needs (Reeve, 2023). The theory argues that the impact of contexts and events on motivation are determined by three aspects: "a controlling aspect, an informational aspect, and an amotivating aspect" (Reeve, 2023, p. 35), wherein the most motivating contexts and events are less controlling, more informational, and less amotivating. Researchers can explore the outcomes and explanatory mechanisms of home via applying cognitive evaluation theory, as they could assess whether specific home contexts are perceived as controlling and/or informational. By doing so, researchers can provide more exact psychological descriptions for the reasons that home is important, but they can also provide evidence that the broader micro-theories of SDT are applicable to the study of home.

Lastly, we leveraged BPNT to identify our primary dimensions, and we utilized prior theorizing and our qualitative investigation to identify subdimensions relevant to the study of home. BPNT and SDT both provide defining characteristics for basic psychological needs rather than simply mandating the existence of three (Deci et al., 2017; Deci & Ryan, 2012; Ryan & Deci, 2024). The existence of defining characteristics suggests that certain needs may remain unidentified, and future researchers may determine that presently unrecognized needs are essential to motivation. For instance, some authors have argued for the basic psychological need for novelty (Bagheri & Milyavskaya, 2020; González-Cutre et al., 2016). If discovered, our applied need-based theory of home is adaptable to the inclusion of additional needs, and future research could postulate subdimensions of any identified needs. Once identified, researchers could then expand the NBHS to include these additional needs, indicating that our endeavor can serve as a foundation to even significant changes in the application of BPNT and SDT.

NBHS and Housing Studies

The creation of the NBHS produces novel perspectives and future research directions on central topics in the discipline of housing studies via interdisciplinary integrations. We highlight three topics chosen due to their centrality to the housing literature: housing satisfaction, location, and people without a dwelling (i.e., homelessness and unhoused). Our intent is to demonstrate the capability of the need-based perspective and the NBHS to advance this scholarship.

Housing Satisfaction

Scholars of finance, economics, and related fields have increasingly investigated the predictors of housing satisfaction (Diaz-Serrano, 2009; Gür et al., 2020; Tran & Van Vu, 2018; Will & Renz, 2025), and differentiating housing and life satisfaction remains a central topic in housing studies (Acolin & Reina, 2022; Park & Kim, 2023; Will & Renz, 2025; Winston, 2017). Authors recognize that these forms of satisfaction are distinct and interrelated, although debates remain regarding the magnitude and temporal consistency of this interrelationship. Integrating need-based approaches to home can bring additional theoretical nuance to this debate.

The need satisfaction of a dwelling may be a significant and primary determinant of housing satisfaction, and people may only be truly satisfied with their dwelling if they feel it addresses their needs for autonomy, relatedness, and competence (Howard, 2025; Soleimani & Gharehbaglou, 2023). Study 4 in the present investigation found that the need satisfaction of a dwelling is strongly and positively related to life satisfaction. This relation may be mediated by housing satisfaction, wherein feelings of home indirectly relate to life satisfaction via the mediator of housing satisfaction. That is, people may develop positive feelings regarding their home when it satisfies basic psychological needs, and these positive feelings regarding home may produce positive feelings regarding life in general. Given the centrality of need satisfaction (Deci & Ryan, 2012; Ryan & Deci, 2024), feelings of home may relate to life satisfaction beyond housing satisfaction, as people may experience subconscious benefits not directly attributed to their home. The pervasive benefits of need satisfaction by home may positively influence people even outside their dwelling (Blunt & Dowling, 2022; Easthope, 2004; Parsell, 2012), potentially causing the wide-ranging benefits to influence life satisfaction beyond housing satisfaction.

In studying these relations, researchers should take a nuanced approach in testing the mechanisms that produce relevant outcomes. A subset of (sub)dimensions may be responsible for producing important personal outcomes, and the benefits of home may be due to satisfying specific needs for most people. For instance, relatedness need satisfaction may more strongly relate to housing and life satisfaction than other forms of need satisfaction, and extant theory would be modified to recognize the enhanced importance of any one (sub)dimension (Howard, 2025; Soleimani & Gharehbaglou, 2023). Taking a nuanced dimensional approach is reflective of trends across most domains in the study of psychological well-being (Al-Khouja et al., 2022; Deci et al., 2017; Ryan & Deci, 2024; Ryan & Ryan, 2019; Vansteenkiste et al., 2023), as it enables more specific predictions and more explicit tests of theory. Therefore, applying our created operationalization may enable future researchers to refine extant theory via more specific empirical testing, enabling the effective integration of scholarship on housing with psychology.

Location

It is impossible to disentangle a dwelling from its location (Bereitschaft, 2025; Can, 1998; Chernobai & Ma, 2022; Sachdeva et al., 2022). While not characteristics of the dwelling itself, per se, the features of a location may nevertheless influence the need satisfaction of a dwelling, as its inhabitants are unable to differentiate between the two. For this reason, the location may be as important as the dwelling itself in developing a sense of home. This consideration is particularly evidence for specific needs. Namely, the satisfaction of relatedness needs by a dwelling are strongly influenced by its location,

particularly the subdimension of Community. The nature of the dwelling may be largely irrelevant to whether it allows its inhabitants to feel close to those within the community, whereas the location may be the essential precipitating factor. Further, other dimensions may be less directly but still strongly influenced by location. For example, people may have their competence needs satisfied by living within a dwelling in a particular part of their locale, regardless of the nature of the dwelling itself. These theoretical linkages suggest that a primary direction for future research is testing the relation of location characteristics to the NBHS dimensions. Identifying significant relations would provide robust evidence that need satisfaction is caused by characteristics outside the dwelling itself, which would indicate that interdisciplinary investigations integrating the study of location with psychology are necessary to obtain a complete understanding of home.

Additionally, people often refer to locations as their home, suggesting that feelings of home can be developed regarding more than dwellings alone (Blunt & Dowling, 2022; Howard, 2025; Kern, 2005). For instance, people may express that they feel at home in a particular city (e.g., New York), rather than a dwelling. Such statements may reflect that broad locations may satisfy basic physical and psychological needs, causing people to associate feelings of home with these locations. These people may feel broadly connected to others (relatedness needs), perceive themselves as being broadly capable at desired tasks (competence needs), and/or believe that a wider range of behaviors are accessible (autonomy needs) in a particular location. These considerations suggest that feelings of home regarding a specific location may be similarly important to feelings of home regarding a dwelling, and future researchers should investigate basic need satisfaction of locations. An adapted version of the NBHS with the reference changed to location rather than dwelling may serve as a useful tool; however, it may also be necessary to create an entirely new need-based location scale. If this is the case, then the current investigation can be used as a template for developing this measure, as we demonstrated that our applied scale development process was particularly effective at creating a measure of need satisfaction.

People without a Dwelling

Much has been written about the detrimental effects of living without a dwelling (i.e., homelessness and unhoused) in the housing literature (Dunn, 2000; Lenhard et al., 2022; Schneider, 2022). It is well known that living without a dwelling is detrimental to well-being, and our applied framework suggests that these detriments occur due to the thwarting of basic physical and psychological needs (Howard, 2025; Soleimani & Gharehbaglou, 2023). The stifling of basic psychological needs causes depression, stress, and anxiety, and people are (sub)consciously motived to restore and satisfy their unsatisfied needs; however, the stifling of basic physical needs may cause people to enter a state of panic. These people may perceive threats to their vital well-being, and evolutionary benefits may cause people to enter a state of significant distress to become particularly motivated to alleviate these vital threats (Deci et al., 2017; Deci & Ryan, 2012; Ryan & Deci, 2024). Unfortunately, when these threats are unable to be alleviated, these prolonged states of panic may cause significant mental health issues (Autin et al., 2022; Van den Broeck et al., 2016; Vansteenkiste et al., 2020). Future researchers should assess the immediacy and extent to which the NBHS

dimensions are threatened when people live without a dwelling, and they should also test whether interventions can alleviate the detrimental effects even when a permanent dwelling cannot be provided, such as temporary housing.

Other relevant conditions can also be explained by our framework. In recent years, greater attention has been provided to unstable living conditions, which refers to the intermittent or unreliable access to a dwelling (Bahchieva & Hosier, 2001; Carroll et al., 2025; Tsai et al., 2024). For instance, people may share living arrangements with many others, and they may be regularly pushed out of their dwelling. Our applied framework indicates that these people suffer from thwarted physical needs (Howard, 2025; Soleimani & Gharehbaglou, 2023). Although their intermittent dwelling arrangements may provide temporary reprieve, people do not fully have their physical needs satisfied unless they perceive their provisions as permanent. Unstable living conditions deny complete basic physical need satisfaction, which leads to both thwarted basic physical and psychological needs. Future researchers should assess the extent that unstable living conditions deny needs relative to other living arrangements, as relative comparisons could provide insights into the importance of temporal stability regarding physical need satisfaction.

Lastly, stable living conditions alone are not sufficient to obtain basic physical and psychological need satisfaction (Howard, 2025). People may experience undesirable living conditions, wherein they possess a stable but hostile residence (e.g., abusive household). In these cases, detrimental psychological outcomes arise, as these people may habitually experience an unsatisfied drive to fulfill their needs (Deci et al., 2017; Deci & Ryan, 2012; Ryan & Deci, 2024; Van den Broeck et al., 2016; Vansteenkiste et al., 2020). For these reasons, policy makers should recognize that dwellings are not sufficient to maximize well-being, and societies should strive toward ensuring that their members have access to homes that satisfy basic physical and psychological needs. Only through providing a sense of home can well-being be maximized.

Methodological Considerations

We utilized modern recommendations for scale development in conducting our studies (Clark & Watson, 2019; DeVellis & Thorpe, 2021; Jebb et al., 2021). Future researchers can utilize our investigation as a guide for scale development efforts. Equally important, we also underwent several of these steps for adapting and creating our indicators of convergent and concurrent validity, such as the alternative need-based measure of home. Because we also provided significant support for these measures, researchers can likewise utilize these scales in their future studies. In cases that the length of our 36-item NBHS prevents its inclusion in surveys, researchers may be able to apply our 13-item adapted measure reported in Study 3 and Appendix A. Likewise, researchers can apply our 4-item measure of home, providing a concise measure to assess feelings of home. Therefore, our efforts can benefit all future empirical investigations of home no matter the constraints on survey length.

Limitations

The scale development process is never complete. While we provided significant support for the NBHS, future researchers should perform further assessments of the measure to

support its validity. Additional indicators of concurrent validity should be tested, namely further antecedents and outcomes of home identified in the housing studies literature (Blunt & Dowling, 2022; Easthope, 2004; Parsell, 2012). Researchers could provide further support for the NBHS, but they could also provide further support for the validity of the need-based approach to home.

We utilized Prolific to obtain a geographically diverse sample, which was evident in the demographic reporting for each of our studies. By ensuring this aspect of our studies, we strengthen the generalizability of our findings. While prior authors have supported the validity of results obtained via Prolific (Albert & Smilek, 2023; Palan & Schitter, 2018; Stanton et al., 2022), it is always necessary to replicate prior findings utilizing alternative sampling sources. Future researchers should replicate the current results using a broader variety of sampling sources to ensure the validity of our findings, such as face-to-face sampling methods.

Because the intent of our study was to undergo the recommended scale development process to create a need-based measure of home, we applied a methodology in each of these studies to achieve this specific goal, which was the cross-sectional survey methodology (Clark & Watson, 2019; DeVellis & Thorpe, 2021; Jebb et al., 2021); however, this methodology may be influenced by common method bias (Podsakoff et al., 2024). While common method bias was not determined to be a significant concern due to the intent of the present series of studies, it can obfuscate the testing of broader models, such as assessments of mediation. Future researchers should apply advanced research designs that can alleviate this concern when testing their models of home, such that they can provide more accurate insights into the validity of their models.

Conclusion

The current article removed significant barriers to the psychological study of home by creating the NBHS, encouraging researchers to investigate this operationalization via supporting its psychometric properties and validity. This instrument enables novel directions for research on the study of home, enabling the integration of need-based perspectives into research in housing studies. Thus, the current article opens new directions for future research via the novel integration of theory, benefiting both psychology and the many domains that study housing.

Note

1. As noted by many authors (see Howard, 2025), the term "homeless" is a misnomer when differentiating dwellings and homes. A person may live in a dwelling and not be considered homeless, although they may not have developed a sense of home regarding their dwelling. Similarly, the term "unhoused" is also a misnomer, as a person may live in a structure other than a house (e.g., apartment) and not be considered unhoused. We henceforth use the phrase, "people without a dwelling," to refer to "homeless" and unhoused" people to ensure the accuracy of language.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

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Appendix A. Need-Based Home Scale (NBHS)

Please indicate your disagreement to agreement with each of the following statements as if it began with, "**My residence (e.g., house, apartment, dwelling, location that you live) …**"

1. Strongly Disagree
2. Disagree
3. Slightly Disagree
4. Neither Disagree or Agree
5. Slightly Agree
6. Agree
7. Strongly Agree

Behavioral Control

1. Enables me to do the daily activities that I want to do.
2. Helps me follow the life trajectory that I want.

3. Gives me autonomy over my life.
4. Offers the opportunity to set my daily routine.

Authenticity

1. Enables me to be myself.
2. Helps me live authentically.
3. Allows me to express my identity.
4. Let's me be who I want to be.

Reflection

1. Reflects my personality.
2. Presents me how I actually am.
3. Is a representation of myself.
4. Is an extension of who I am.

Positive Self-Presentation

1. Shows positive aspects of myself.
2. Makes me proud of myself.
3. Causes me to feel good about myself.
4. Reflects my accomplishments.

Close Others

1. Enables me to develop good relations with those close to me.
2. Allows me to connect with those who are important to me.
3. Aids in developing relationships with those close to me.
4. Helps me create bonds with those who are important to me.

Community

1. Helps me develop good relations with my community.
2. Gives me broader connections with society.
3. Connects me to a larger community.
4. Assists in maintaining connections with my neighborhood.

History

1. Let's me feel a sense of attachment to those who came before me.
2. Let's me feel close to my personal history.
3. Provides me a sense of closeness with history.
4. Gives me a sense of attachment with my family history.

Physical Well-Being

1. Allows me to feel physically comfortable.
2. Allows me to be physically healthy.
3. Provides the essentials for my physical well-being.
4. Caters to my physical needs.

Stability

1. Provides reliable physical shelter.

2. Is a consistent physical space.
3. Provides a sense of physical security.
4. Gives me a stable physical space.

Note. When administering the Need-Based Home Scale (NBHS), do not include dimensional labels.

Appendix B. Adapted Three-Dimensional Need-Based Home Scale

Please use the following response format to indicate your disagreement to agreement with the following items. The term residence refers to the location that you live (e.g., house, apartment, dwelling, etc.).

1. Strongly Disagree
2. Disagree
3. Slightly Disagree
4. Neither Disagree or Agree
5. Slightly Agree
6. Agree
7. Strongly Agree

Competence

1. I feel competent in my residence.
2. I am good at the things I do in my residence.
3. I really master my tasks in my residence.
4. I have the feeling that I can even accomplish the most difficult tasks in my residence.

Relatedness

1. I feel connected with other people in my residence.
2. Some people I have at my residence are close friends of mine.
3. In my residence, I can talk with people about things that really matter to me.
4. In my residence, I feel part of a group.

Autonomy

1. I would not do things in my residence differently.
2. In my residence, I rarely feel like I have to follow other people's commands.
3. In my residence, I never feel forced to do things I do not want to do.
4. I feel free to do things the way I think it could best be done in my residence.
5. I feel like I can be myself in my residence.

Note. When administering this adapted three-dimensional need-based home scale, do not include dimensional labels. This three-dimensional need-based home scale was adapted from the following source: Dysvik, A., Kuvaas, B., & Gagné, M. (2013). An investigation of the unique, synergistic and balanced relationships between basic psychological needs and intrinsic motivation. *Journal of Applied Social Psychology*, 43(5), 1050–1064.

Appendix C. Unidimensional Measure of Home

Please use the following response format to indicate your disagreement to agreement with the following items. The term residence refers to the location that you live (e.g., house, apartment, dwelling, etc.).

1. Strongly Disagree
2. Disagree
3. Slightly Disagree
4. Neither Disagree or Agree
5. Slightly Agree
6. Agree
7. Strongly Agree
8. My residence feels like home to me.
9. I would consider my residence to be home.
10. I feel at home in my residence.
11. I feel that my residence has all the qualities of home.