The role of perceived housing quality and perceived choice to recovery: An ecological perspective on a housing first program in Lisbon

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ABSTRACT

This study explores, from an ecological perspective, the relationship between perceived housing quality and the perception of choice, and between perceived choice and recovery of 45 Housing First Lisbon participants. For this purpose, we used a quantitative method and applied three instruments that report perceived housing quality, perceived choice and severe mental illness recovery. The findings reveal a significant and positive association between perceived housing quality and perceived choice, and between perceived choice and recovery, with choice being predicted by housing quality and recovery predicted by choice. These results reinforce the scientific evidence regarding the success of housing first models as a consumer choice-driven intervention, addressing pertinent environmental factors that contribute to housing stability. The study demonstrates that recovery processes can be maximized through services that empower their consumers by allowing them to choose and control the priority and order of the support services received.

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1. Introduction

Taking into consideration both individual and environmental factors, the ecological paradigm of human experience emphasizes the importance of a profound knowledge regarding the relationship that individuals establish with their habitats (Bronfenbrenner, 1994; Kelly, 2006; Levine, Perkins, & Perkins, 2005; Wright & Kloos, 2007). This ecological perspective is therefore essential in approaching the subject of formerly homeless persons with severe mental illness (SMI) and their individual recovery processes. The multidimensional nature of recovery, as defined by Anthony (1993), can be triggered by the shifting of contexts which shape the different path a person can choose in their individual journey. Such journeys, however, as noted by Davidson, Sells, Sangster, and O’Connell (2005), as well as Ralph (2005), do not happen in a void depleted of environmental and social context. This is the principle we apply when we refer to “choice”. Not an abstract concept, but an empowering one. This is aroused when people have different opportunities provided by empowering settings that should lead to psychological empowerment. According to Zimmerman (1995), one of the components of psychological empowerment is “domain specific perceived control” (p. 588). One of the goals of this research was to frame the theoretical basis in order to understand the inherent relationship between choice and control. For this reason, the operationalization of the concept of “choice” is identified as the relationship of choice and control, reflecting the level of choice and sense of control that people feel they have over their housing, the support they receive, and the level of control they consider they have regained over their own lives. With this in mind, the option of merging these concepts into “perceived choice” was intentional after we considered that there is no real choice without control and no real control without choice. Taking this into account, it is evident that the housing services assisting this population should strive to adopt policies and practices that, while based on recovery-oriented principles, act within an ecological approach that allows them to (re)claim their lives and roles as citizens in the community (Gillis, Dickerson, & Hanson, 2010; Kirst, Zerger, Harris, Plenert, & Stergiopoulos, 2014). Carling (1995) advocated that housing program users should be given choice and control regarding the type of housing that they want and that this should be a guideline for supported housing approaches. This ought to be done while taking into account the flexibility of the context that surrounds the individual, with natural...
and community support services that are sensitive to the individual needs, personal goals and housing preferences of each person (O’Connell, Rosenheck, Kasprów & Frisman, 2006; Ornelas, Martins, Zilhão, & Duarte, 2014; Tsemberis & Eisenberg, 2000). Housing recovery-oriented programs should promote affordable, safe and quality housing in integrated settings. This will establish a counterpoint to the institutionalization care philosophy and target policy makers, to gather evidence and shape policy in order to facilitate the sustainability of such housing programs (Kloos & Shah, 2009; Thompson, Petticrew, & Morrison, 2001). The ecological values presented here should be integrated into collaborative methods that encompass the scope of the technical and experiential knowledge of their users, developing approaches capable of changing the environments, policies and systems in which we operate (Carling, 1995; Goering & Tsemberis, 2014; Nelson, Kloos, & Ornelas, 2014; Ornelas, Duarte, & Jorge-Monteiro, 2014).

1.1. Theoretical framework

Given the ecological foundations previously established, in which formerly homeless persons navigate their individual recovery processes, we propose to examine the influence of the environment on safety and empowerment of this population. We do this by exploring the relationship between three key variables of the supported housing approach: perceived housing quality, perceived choice, and recovery. By doing this, we propose that perceived housing quality has a significant effect on the perception of choice and control, which in turn is related to the recovery processes of the consumers of a Housing First program. The hypotheses presented here are grounded in the literature demonstrating that consumer choice and sense of control over housing features and support services are contributors to a person’s recovery process (Nelson, Sylvestre, Aubry, George, & Trainor, 2007; Greenwood, Schaefer-McDaniel, Winkel, & Tsemberis, 2005; Nelson & Parkinson, 2003; Srebnik, Livingston, Gordon, & King, 1995). Furthermore, we extend that knowledge through an ecological perspective that links environmental features, such as housing quality, to recovery at its fullest potential as a profoundly individual, yet fully contextual process (Borg et al., 2005; Kloos & Shah, 2009).

1.2. Housing first, an ecological perspective on housing quality and perceived choice

According to Case (1996) and Moore (2000), the concept of home has a critical influence on how people experience and define their social context. Having a house enables feelings of comfort and warmth, as well as physical and emotional security, which in turn allows individuals to develop daily routines within a framework of empowerment and control over their lives (Borg et al., 2005).

Regarding the population in this study, Padgett (2007) found that formerly homeless persons are not only able to live without vigilance or supervision, but also display ontological security markers, such as control perceptions and reassuring daily routines, and therefore, take advantage of the benefits of having a home. When addressing housing quality, it is important to consider both the physical and psychosocial characteristics. Physical quality refers to the structural quality, as well as the comfort found within not only the house itself, i.e., its furniture, floor, walls and odors, but also local neighborhood noise levels, access and amenities (Evans, 2003; Nelson et al., 2007). The psychosocial dimension of housing quality is related to a sense of belonging, place identity, citizenship, privacy and safety (Cuba & Hummon, 1993; Nelson, Hall, & Walsh-Bowers, 1998; Ornelas, Martins et al., 2014; Smith, 1994; Townley, Kloos, & Wright, 2013; Ware, Hopper, Tuggenberg, Dickey, & Fisher, 2007; Wells & Harris, 2007; Wright & Kloos, 2007). Therefore, the perception of housing quality, taking into account both dimensions, has a great influence on a person’s life because it is where they normally spend most of their time (Wells, Moch, 2003; Evans, Wells, Chan, & Saltzman, 2000; Nelson et al., 2007). One of the psychosocial processes affected by housing quality is the perception of personal control, as people feel better and have better mental health when they feel they live in quality housing, and can control their surroundings (Evans, 2003; Krieger & Higgins, 2002; Fisk, Sells, and Rowe (2007) argue that promoting a safe and stable housing environment largely enables feelings of empowerment, whilst at the same time strengthening the social support networks in the local communities where people live. This is crucial for the transformation between a null citizenship status to a critical and analytical awareness surrounding the context in which one is immersed, thus facilitating the emergence of full citizenship awareness and the rebuilding of social capital (Fisk et al., 2007; Ornelas, Duarte et al., 2014; Zimmerman, 1995).

Research studies reinforce the importance of support services that provide conditions in which their users feel comfortable and satisfied with their environment. Providing individuals with the opportunity to make choices about the placement of furniture or to decorate as they please provides them with a place of control where they feel empowered, not just because they can once again control the surroundings of their existence, but their lives as a whole, in both personal and environmental arenas (Cloutier-Fisher & Harvey, 2009; Kloos & Shah, 2009; Tsemberis & Eisenberg, 2000; Wright & Kloos, 2007). Nelson et al. (1998) found that participants’ levels of choice and control over housing features were positively correlated with the participants’ independent functioning. Tsemberis, Rogers, Rodis, Dushuttle, and Skyryha (2003) found that individuals in supported housing settings scored higher levels of satisfaction with several aspects of their homes than individuals in more restrictive settings, and overall, were more satisfied with their level of choice and privacy. Finally, Piat et al. (2008) found that individuals living in independent housing settings chosen according to their individual preferences revealed higher levels of autonomy.

1.3. Housing first, the role of housing perceived choice in promoting recovery

Without access to housing, homeless persons with SMI are considered to have several limitations in engaging their recovery processes (Tsemberis & Eisenberg, 2000). Recovery can be comprehended as a deeply individualized process, characterized by the uniqueness of the changing values, attitudes, goals, skills and roles in a person’s life (Anthony, 1993). As such, hope plays a prominent role as one of the foundations present in this process, because it drives individuals toward regaining confidence in both themselves and others, and in the belief that it is possible to reclaim control over their lives (Gillis et al., 2010). Recovery-oriented services should thus call for greater choice, considering individual preferences and aiming to maximize hope for a better future (Gillis et al., 2010; Parkinson, 2003; Tsemberis, Gulcur, & Nakae, 2004). Traditional housing programs do not usually advocate empowering practices and policies anchored in the principles of choice and control over aspects such as housing type, treatment and support services (Ornelas, Duarte et al., 2014; Tsemberis & Eisenberg, 2000; Tsemberis et al., 2004). Tsemberis and Eisenberg (2000) argue that the step-by-step nature of such programs impedes not only the achievement of housing stability, but also recovery by undermining control over choice and autonomy, and promoting dependency through an uneven consumer-provider relationship (Gaetz, 2014; Stefancic & Tsemberis, 2007). Moreover, the absence of control over aspects such as housing features and course of treatment may aggravate the SMI experience by frustrating consumers, failing to...
provide what they believe they need, in contrast to what they are actually provided by support services. This can in fact exacerbate a sense of helplessness, resulting in a decision to return to the streets as an alternative to complying with treatment demands (Evans, 2003; Greenwood et al., 2005; Harp, 1990).

Through the recognition that consumers may be in different stages of their individual recovery processes, and keeping in mind that for an intervention to be successful, it has to include an empowering vision to aid such processes (Gillis et al., 2010), each individual should have the right to control the choices that determine their lives, without jeopardizing their homes or the support services they receive (Tsemberis et al., 2004). Naturally, not all of those choices will necessarily reflect a desired outcome. This, however, opens a path for learning and responsibility which can be gained from making mistakes, not only for the consumer, but for the provider as well (Greenwood et al., 2005). Herein lies the meaning of having a home, reduced hospitalization and decreased treatment, while allowing access to several of the same opportunities as those available to the domiciled population, is positively related to the meaning of having a home, reduced hospitalization and decreased homelessness rates, playing a significant role in the recovery process (Borg et al., 2005).

Housing First Lisbon (HFL) is an example of a recovery-oriented service seeking to support people with SMI by retrieving them from the streets and promoting choice and recovery, advocating the participants’ access to basic rights, such as independent and permanent housing. At the same time, it facilitates “bridging” and “bonding” with local community resources, such as landlords and local neighbors (Goering & Tsemberis, 2014; Kelly, 2006; Ornelas, Martins et al., 2014). As such, the ideological foundation of this program is based on the belief that every single person has the right to a house, enhancing a sense of empowerment and control over one’s life. This allows people to avail themselves of several community resources, reinforcing their natural support networks and potentiating the emergence and maintenance of the individual recovery process (Fisk et al., 2007; Gillis et al., 2010; Ornelas, Martins et al., 2014; Tsemberis et al., 2004; Tsemberis, Kent, & Respress, 2012).

1.4. Housing first Lisbon

HFL is the first Housing First program in Portugal, created in 2009 by a non-profit organization, AEIPS – Associação para o Estudo e Integração Psicosocial. The program aims to support homeless people with a dual diagnosis of SMI and substance misuse in accessing and maintaining independent apartments in the cities of Lisboa and Cascais.

Following the consumer-driven philosophy at the core of the Housing First model, it operates through recovery-oriented services and views housing as a basic right. Separating housing from treatment, the program provides immediate access to permanent housing, considering individual choice as one of its main principles, while not demanding that its users engage in psychiatric treatment or maintain sobriety. Apartments are rented according to the participants’ preferences from the private housing market and are scattered throughout the city’s affordable houses in mainstream neighborhoods, with access to diverse local resources such as public transportation and other local amenities. The apartments vary from studio apartments to one-bedroom units. All apartments have a fully equipped kitchen and bathroom. Support services are flexible, individualized and tailored to meet the participants’ needs and goals. They are available on-call, 24 h a day and are delivered at the participants’ apartments (at least one pre-arranged home visit per week), within the neighborhood or in other community settings.

The program organizes a weekly group meeting at AEIPS’s head office, in which participants have the opportunity to raise and discuss issues they find relevant or to share experiences with their peers and the program staff, thus contributing to the program’s development and improvement. Using an ecological and collaborative approach, the staff work with the users in order to address their needs regarding housing management, citizenship documents and legal issues, access to health services, income and social benefits, employment and education projects, community activities and neighborhood relationships. Evaluation reports have shown a housing retention rate of 80%, which represents a significant decrease in the use of emergency services and psychiatric hospitalizations, as well as a significant improvement in the recovery process (Ornelas, 2012).

1.5. Conceptual framework and hypotheses

This study intends to explore the relationship of housing quality to choice, and choice to recovery. The hypotheses considered were that perceived housing quality and perceived choice over housing and treatment would be positively correlated (Nelson et al., 1998; 2007; Piat et al., 2008; Srebnik et al., 1995; Tsemberis et al., 2003, 2004), and also that perceived housing choice would be correlated with SMI recovery (Gillis et al., 2010; Greenwood et al., 2005; Nelson et al., 2007; Patterson, Rezansoff, Currie, & Sommers, 2013; Tsemberis et al., 2004; Wright & Kloos, 2007). Furthermore, we proposed to explore the predictive nature of perceived housing quality in the perceptions of choice, and of the latter in SMI recovery. Finally, we also considered that perceived choice may mediate the effect between perceived housing quality and SMI recovery, since this variable could explain how and why housing quality can affect recovery (Baron & Kenny, 1986). This framework is based on the belief that housing environment has a crucial role in recovery. Formerly homeless persons can regain a sense of control through the possibility of being able to once again make choices about housing features, which in turn can potentiate feelings of efficiency and empowerment, towards their mental health and recovery (Tsemberis et al., 2004). Programs like Housing First also provide the perception of choice concerning treatment, which promotes and facilitates engagement in the program itself. Recovery goes beyond choice and involves the reestablishment of a positive sense of self during the existence of mental illness (Borg et al., 2005; Polvere, Macnaughton, & Piat, 2013).

The hypotheses in this study are (a) Perceived housing quality is a predictor of perceived choice; (b) Perceived choice is a predictor of SMI recovery; (c) Perceived choice influences specific recovery dimensions; (d) Perceived choice mediates the relation between perceived housing quality and recovery.

2. Method

2.1. Procedure and sample

The findings reported in this paper originate from a comprehensive evaluation presently being conducted on the implementation of the Housing First program in Lisbon. The eligibility criteria only required the participants to be living in one of the program’s apartments and to have done so for at least one year. All
of the participants had a history of homelessness, diagnosis of SMI and substance misuse. The interviews were conducted either at the AEIPS head office or at the participants’ homes. After the interviewers explained the terms of the study, the participants gave their written consent and proceeded to answer, face to face, to an interviewer using several instruments assessing their demographic characteristics, housing quality, perceived choice, recovery, community integration, quality of life, satisfaction and evaluations of their experiences in the program. For this study only, we resort to data indicative of housing quality, perceived choice and SMI recovery. A summarized description of the participants regarding social demographic factors and economic and homelessness history, was assessed by the Demographics, Housing, Vocational and Service Use History, developed by the Homelessness Demonstration Project – At Home/Chez Soi.

The majority of the participants (73.3%) are male, while 26.7% are female. Nearly half (55.6%) are between 36 and 45 years of age, 17.8% range between 26 and 35, 17.8% between 46 and 55, and 8.9% are between 56 and 65. Most (77.8%) are of Portuguese nationality, while 6.7% were born in Angola, 6.7% in Cape Green, 4.4% in Guinea-Bissau and 2.2% in Mozambique, and 2% reported another European country. At the time of the interviews, most of the participants (73.3%) were unemployed, single and lived alone (84.4%). Regarding the time spent homeless, the participants reported the following: 17.8% were homeless for less than a year, 15.6% for one to three years, 31.1% for four to nine years, 13.3% for 10–15 years and 17.8% for more than 15 years. A small proportion of the sample (4.4%) could not recall the exact amount of time spent living in a homeless condition. Nearly half (57.8%) of the participants had their first homeless experience between the ages of 15 and 35 years old. About 23 people (51%) looked at more than one housing option, and all of the participants live in the house they choose.

2.2. Measures

The present study uses a quantitative approach for assessing the relationship between the results given by the three instruments to ascertain perceived housing quality, perceived choice and recovery. To determine the nature and the intensity of the relationships established between measures, we used a correlational design followed by a linear regression analysis (Cohen, Cohen, West, & Aiken, 2003).

2.2.1. Perceived housing quality

The participants’ satisfaction with housing quality was assessed using a 5-item scale that included topics such as safety and spaciousness (α = .8). These items were chosen from Toro et al. (1997) and were analyzed using a 5-point Likert scale response set ranging from “Very bad” to “Very good”.

2.2.2. Perceived choice

A 14-item scale was used to measure perceived choice (e.g., “How do you feel about the level of choice you had on the place you live?”, “How do you feel about how you spend your day?”). The scale (α = .77) was derived from two existing instruments which measure choice perceptions (Srebnik et al., 1995; Tsemberis et al., 2003), with some modification of items. The items are rated on a 5-point Likert scale, with anchor points ranging from “highly unsatisfied” to “highly satisfied”.

2.2.3. Recovery

Recovery was measured by the Recovery Assessment Scale (RAS) developed by Corrigan, Salzer, Ralph, Sangster, and Keck (2004). This 24-item scale yields five factors: personal confidence and hope (RAS_1), willingness to ask for help (RAS_2), goal and success orientation (RAS_3), reliance on others (RAS_4) and no domination by symptoms (RAS_5). The items are rated on a 5-point scale from “totally disagree” to “totally agree”, with higher scores reflecting a greater assessment of recovery (α = .87).

2.3. Analytic strategy

We adopted a cross sectional design (N = 45) with a three stage statistical approach in order to assess the relationship between perceived housing quality, perceived choice and SMI recovery. We started by conducting a Pearson product-moment correlation coefficient and a Spearman’s rank-order correlation coefficient to determine the relationship between the variables (p > .05). We then continued to use correlation analysis on the relationship between choice and all five recovery factors. The next stage was to run a linear regression analysis, ANOVA one-way (p < .05) to further explore the associations found in the first step. In the third and final stage, we examine the possibility of perceived choice acting as a mediator on the relationship between housing quality and recovery. For that purpose, we performed a linear regression analysis, ANOVA one-way (p < .05). According to Baron and Kenny (1986), to establish mediation, three conditions must be met: first to regress the potential mediator (perceived choice) on the independent variable (perceived housing quality). The independent variable must affect the mediator. We then regress the dependent variable (SMI recovery) on the independent variable (perceived housing quality), in which the independent variable must affect the dependent variable. Lastly, we regress the dependent variable (SMI recovery) on both independent variable (perceived housing quality) and mediator (perceived choice). In this last stage, the mediator must affect the dependent variable. The software package used was SPSS v. 22.

3. Results

Table 1 presents the mean and the standard deviation of the variables examined in the study.

Initially, correlation analyses were used to assess the nature of the relation between perceived housing quality, perceived choice and recovery. The Pearson product-moment correlation coefficient was run to measure the strength of the linear relationship between the variables (p > .05). Correlation was also run to measure the relationship between choice and all five recovery factors. For this purpose, the Spearman’s rank-order correlation coefficient was calculated for the relationship between choice and factors four and five (p < .05). After the correlations were asserted, we then performed linear regression analyses ANOVA one-way to further explore the associations found and to establish how housing quality (predictor variable) relates to choice (outcome variable), and how choice (predictor variable) relates in turn to recovery (outcome variable). We also tested choice as a possible mediator of housing

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Means and standard deviations on variables in the study (N = 45).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choice</td>
<td>Quality</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>3.99 (.59)</td>
</tr>
</tbody>
</table>
quality and recovery. The results are presented in Tables 2–6.

3.1. Overview of results

**Hypothesis 1. Housing quality is a predictor of perceived choice.**

To ascertain whether the measure of housing quality was related to the measure of choice perception, we performed a correlation analysis. The results, as shown in Table 2, reveal a significant positive association between both measures, with an increase in one of the variables reflecting an increase in the other \( (p < .01) \). The regression analysis ANOVA one-way revealed that housing quality is a predictor of perceived choice as a predictor, explaining 14.7% of the variance in choice perception \( F(1, 43) = 7.39, p < .01 \).

**Hypothesis 2. Perceived choice is a predictor of recovery.**

Again, as is shown in Table 3, the results indicate a significant positive association between both measures, with an increase in one of the variables reflecting an increase in the other \( (p < .01) \). For the ANOVA one-way, perceived choice accounted for 14.5% of the variance in recovery \( F(1, 43) = 7.28, p < .01 \).

**Hypothesis 3. Perceived choice influences specific recovery dimensions.**

Table 4 demonstrates that a greater perception of choice and control over housing, treatment and support was found to be significantly and positively related to the recovery dimensions of personal confidence and hope \( (p < .05) \) and reliance on others \( (p < .01) \).

**Hypothesis 4. Perceived choice mediates the relation between perceived housing quality and recovery.**

Although the study confirmed the other hypotheses, Table 5 showed that perceived choice does not mediate the relation between perceived housing quality and recovery \( (p > .05) \). As we have seen before according to Baron and Kenny (1986), three conditions must hold to establish mediation. Although the first condition is confirmed as Table 2 and the first hypothesis shows, the second

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**Table 2** Relationship of perceived housing quality to perceived choice, \( N = 45 \).

<table>
<thead>
<tr>
<th>Correlations (Person’s R)</th>
<th>Perceived housing quality</th>
<th>Perceived choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>− .38**</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>− .00</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>− 45</td>
<td></td>
</tr>
</tbody>
</table>

**ANOVA**\(^{a}\) \( R^2 \)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>2.27</td>
<td>1</td>
<td>2.27</td>
<td>7.39</td>
<td>.00*</td>
</tr>
<tr>
<td>Residual</td>
<td>13.24</td>
<td>43</td>
<td>.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15.52</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{a}\) Dependent Variable: Perceived choice.

**Table 3** Relationship of perceived choice to recovery (RAS), \( N = 45 \).

<table>
<thead>
<tr>
<th>Correlations (Person’s R)</th>
<th>—</th>
<th>RAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived choice</td>
<td>—</td>
<td>.38**</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>—</td>
<td>.01</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>—</td>
<td>45</td>
</tr>
</tbody>
</table>

**ANOVA**\(^{a}\) \( R^2 \)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>2.90</td>
<td>1</td>
<td>2.90</td>
<td>7.28</td>
<td>.01*</td>
</tr>
<tr>
<td>Residual</td>
<td>17.16</td>
<td>43</td>
<td>.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20.07</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{a}\) Dependent Variable: RAS.

**Table 4** Relationship between perceived choice and recovery (RAS) dimensions.

<table>
<thead>
<tr>
<th>Correlations (Person’s R)</th>
<th>Perceived choice</th>
<th>RAS Factor_1</th>
<th>RAS Factor_2</th>
<th>RAS Factor_3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived choice</td>
<td>Pearson correlation</td>
<td>1</td>
<td>.33</td>
<td>.21</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>—</td>
<td>—</td>
<td>.02</td>
<td>.15</td>
</tr>
<tr>
<td>N</td>
<td>—</td>
<td>—</td>
<td>45</td>
<td>45</td>
</tr>
</tbody>
</table>

**Correlations (Spearman’s rho)**

<table>
<thead>
<tr>
<th>Perceived choice</th>
<th>RAS Factor_4</th>
<th>RAS Factor_5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.44**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>N</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

\(^{*}\) Correlation is significant at the .05 level (2-tailed).

\(^{**}\) Correlation is significant at the .01 level (2-tailed).

\( ^{a} p < .05 ^{**,} p < .01 \).
condition does not hold. As we can see on Table 5, the ANOVA one-way revealed that housing quality only explained 3% of the variance in SMI recovery $F(1, 43) = .13 (p > .05)$. As such, perceived housing quality does not predict recovery. There is only a significant statistical relationship between perceived housing quality and recovery when perceived choice is considered, as Table 6 shows, explaining 15.4% of the variance of recovery $F(2, 42) = 3.82 (p < .05)$. Therefore, this hypothesis is not confirmed.

4. Discussion

The present study aims to contribute to the existing literature regarding the ecological impact of housing on the recovery process of formerly homeless persons with SMI. We proposed to do so by exploring the relationship between perceived housing quality and perceived choice over housing, treatment and support services, from the perspective of 45 participants of a Housing First program in Lisbon. Additionally, we proposed that the perceptions of choice also interact in different ways with the different recovery domains.

It was hypothesized that perceived housing quality would positively correlate with perceived choice, and perceived choice would, in turn, correlate with recovery. Furthermore, perceived housing quality would predict perceived choice, and perceived choice would predict recovery. Fig. 1 is a schematic representation of the model we proposed and from which our hypotheses were drawn, including the measures used and each level of analysis.

4.1. The role of housing quality in perceived choice

This research examines, from an ecological perspective, the influence of housing environment (more specifically - housing quality) on the SMI recovery of formerly homeless individuals. According to Kelly (2006), such a perspective should look for the “informal community places for well-being” (p. 254), through the connections established between persons and places. With this ecological perspective as a background, the findings reported here add to the existing literature on supported housing. Our results are in congruence with the stated hypothesis in that they reveal a significant and positive correlation between perceived housing quality and perceived choice. Additionally, the results show that perceived housing quality added to the prediction of perceived choice. This is consistent with previous research. As Evans et al. (2003) and Borg et al. (2005) found, the structure provided by quality housing translates into a sense of physical and emotional security and protection, through the reacquisition of control over one’s life. Our results support this argument. The empowerment theory provides an understanding of this matter, advocating that by changing their context, people can regain control over their lives (Zimmerman, 1995). Nelson et al. (2007) also found that housing quality was related to perceptions of choice and subjective quality of life, with the first two measures acting as predictors of the last. There is a vast body of research that argues in favor of the fundamental right of all individuals to a house: more than just a house, a home that offers comfort, privacy and safety. Like the domiciled population, homeless individuals with SMI should be able to choose, get and keep a house (Tsemberis et al., 2004). Such a process will open the possibility to actively participate in negotiation processes regarding all aspects of their lives and regain control over the types of technical support that they receive. Like their participation in these important decision-making processes, the possibility of creating reassuring daily routines for themselves (Borg et al., 2005; Padgett, 2007) and controlling aspects such as the decoration of their homes will assist in providing them with the grounds for a sense of security and control.

4.2. The relationship of perceived choice and SMI recovery

This research examined one of the main premises of consumer-driven supported housing: that consumer choice and control over housing and support are key elements to enhance and maintain recovery. Our results provide support for this premise by revealing that perceived choice adds to the prediction of recovery. If we consider recovery through an ecological lens, we understand that support services should adopt practices that include consumer choice. Only in doing so will the services achieve policy change that empowers the relationship between individuals and natural settings. By fostering choice over housing, recovery-oriented services like Housing First endorse a sense of control and the development of feelings of self-efficacy over several aspects of its consumers’ mental health and recovery (Tsemberis et al., 2004). Greenwood et al. (2005) argued that the choice perception of Housing First consumers is related to a decrease in psychiatric symptoms. Our results support those findings, and also provide us with a broader understanding of SMI recovery that goes beyond the manifestation of the symptomatology of mental illness: we gain a comprehension of the ecological factors that are connected with recovery.

Several other studies have reinforced the importance of choice in community mental health outcomes. Srebnik et al. (1995) found that a sense of control has a direct impact on housing stability, housing satisfaction and psychological stability. Nelson et al. (2007) reported higher levels of a sense of control over housing and support services in Housing First consumers, compared with group arrangement residents. Our results meet and expand such findings, enhancing our understanding of how independent, permanent, quality housing and support services, using an empowering and ecological approach, are able to promote and sustain the recovery of formerly homeless persons. This is possible when they regain access to natural contexts in which they can resort to local community resources, and rebuild and strengthen mainstream interactions with local support networks. This will naturally boost their community integration and assist them in maintaining a healthy progression over the course of their recovery processes (Fisk et al., 2007; Gillis et al., 2010; Ornelas, Duarte et al., 2014; Ornelas, Martins et al. 2014). Therefore, we support Srebnik et al. (1995), who highlighted consumer “voice” and choice as basic foundations in striving to address community mental health.

4.3. Perceived choice and the different domains of recovery

Gillis et al. (2010) define hope as the core principle of recovery.

Fig. 1. Correlation and regression models tested in current study.
According to Ornelas, Duarte, et al. (2014) and Ornelas, Martins, et al. (2014), recovery relies on supportive environments that provide opportunities and resources, where individuals can exercise significant roles and participate in meaningful community activities. The ecological perspective through which we examine this relationship can be better understood if we consider how the participants’ recovery perceptions can be related to regaining personal control. This in turn will boost a sense of independence, after a period of time that was characterized by feelings of helplessness and powerlessness. The confidence felt after regaining this right will provide the grounds for the construction of new social connectedness webs within the community and citizenship contexts.

Consistent with previous research (Kirst et al., 2014; Polvere et al., 2013), the findings of this study reveal a link between not only choice and hope for a better future, but also the confidence both in self and in others as a means to achieve it. The present research provides a broader comprehension of the relationship between choice and recovery, which goes beyond the scope of hope and confidence. The results found here suggest other significant recovery arenas that should be paramount for support services, namely consumers’ willingness to ask for help, and their goal and success orientation. Padgett, Henwood, Abrams, and Drake (2008) found that participants were critical of the quality of support that was offered. In light of this, providing control over the choices that matter the most regarding housing and treatment can greatly boost reliance and trust in others. This will lead to sustained positive relations between users and stakeholders, through empowering interventions regarding the way formerly homeless persons perceive their futures, both during or after mental illness. The establishment of such empowering relationships is supported by the results found regarding the relationship between choice, and the willingness to ask for help, as well as the participants’ goal and success orientation. Although they have a nonlinear correlation, both measures scored the highest values on the Recovery Assessment Scale. Such results underline the need for the services to provide quick and effective responses that facilitate their users’ willingness to ask for help whenever they feel it is needed, as well as the development of individual recovery plans. The concept of choice is central to a recovery philosophy, whether in treatment (Deegan & Drake, 2006) or housing decisions. Thus, the services must adopt practices that are permeable and sensitive to users’ needs and wishes through the construction of joint plans that allow personal growth.

Although the results did not confirm perceived choice as a mediator of the relation between perceived housing quality and recovery, as we posed in hypothesis 4, a theoretical analysis of this outcome must be discussed. One of the aspects that we should consider is the fact that all of the houses in Housing First Lisbon have similar features and characteristics, which potentially could have led to the homogeneity of answers by the participants. This could be one of the reasons why the results did not show a significant statistical relation between perceived housing quality and recovery. However, if we consider the scientific evidence in this field, we conclude that perceived choice should indeed be taken into account when we refer to perceived housing quality. As Carling (1995) and O’Connell et al. (2006) asserted, housing program users should have the right to choose and control where and how they want to live. Therefore, theoretically, it is important to consider choice and control perceptions when addressing the relation between perceived housing quality and recovery, as it only makes sense to establish a relation between these two variables if individuals have the right to choose and feel a sense of control over the space where they live. As Nelson et al. (2007) advocated, consumer choice plays a key role in the perception of housing quality and in improving wellness, underlining the importance of empowering housing decisions in the lives of people with SMI.

4.3.1. Limitations

There are some limitations in this study that should be taken into consideration. First, the cross-sectional research design targets only one sample in a Housing First program. The use of a control group would allow for a broader and more accurate understanding of the relationship established between perceived housing quality, perceived choice and recovery. Second, the data were collected at one moment in time. The use of longitudinal data would provide a clearer sense of the causal relations between the variables. To guarantee the causality assessment and the internal validity of this study, a random assignment to conditions should also be considered. Third, because both perceived housing quality and perceived choice are self-reported measures of the same individuals, this study is vulnerable to mono-method bias, which can threaten its internal validity. Also, this undermines our ability to make causal conclusions, because part of the relationship between these two variables is due to shared methods variance. Fourth, the fact that we didn’t use a pretest-posttest design could also pose threats to its internal and external validity. According to Dimitrov and Runwall (2009), the use of pretest-posttest enables the production of more powerful tests, whilst allowing us to check differences between scores in order to reduce error variance and eliminate systematic bias. Since external validity refers to the extent in which the experimental effect can be generalized across populations, settings, research variables and measurement instruments, the lack of a pretest-posttest design can compromise the internal validity of how the instruments measure the effect of perceived housing quality, perceived choice and recovery. Consequently, this limits the generalization of our findings in other housing first groups.

Future research should adopt a longitudinal approach in order to keep track of possible changes in the variables being studied, contributing to a more holistic perception of their evolution over time. Future studies should also consider the possible existence of mediating effects played by other measured or unmeasured variables on the recovery processes of Housing First consumers.

Finally, further research should also develop collaborative methodologies that include participants as research collaborators in order to guarantee that all research aspects are pertinent and worthwhile. In addition, it should consider broader cross-sectional data in order to obtain greater variance to boost internal validity and to prevent Type I and II errors.

5. Conclusion

The results of the current study add to the vast literature consolidating the argument that environment factors, such as perceived housing quality, interact closely with psychological variables such as choice and control perceptions. These variables will in turn potentiate the birth and maintenance of psychological outcomes, such as an empowered recovery. The finding that perceived housing quality adds to the prediction of perceived choice, and that perceived choice adds to the prediction of SMI recovery, strengthens the evidence that both environmental factors, and psychological variables are important contributors to SMI recovery. This is the most significant contribution of this study to the literature on consumer choice-driven programs for the homeless population. Allowing consumers to choose their preferred housing and supporting settings is still not part of the general professional culture in mental health services. Just as severe mental illness cannot be fully explained by homelessness and vice versa, recovery is also not exclusively the result of the (re)acquired right to control and choose housing and support. The results found in
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