

Squalor in Community-Referred Hoarded Homes

May Luu

Nathanael Lauster

University of British Columbia

University of British Columbia

Christiana Bratiotis

Jesse Edsell-Vetter

University of British Columbia

Metro Housing Boston

Sheila R. Woody

University of British Columbia

Author Note

May Luu, Department of Psychology, University of British Columbia; Nathanael Lauster, Department of Sociology, University of British Columbia; Christiana Bratiotis, School of Social Work, University of British Columbia; Jesse Edsell-Vetter, Metro Housing Boston, Boston, MA; Sheila R. Woody, Department of Psychology, University of British Columbia.

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Correspondence concerning this article should be addressed to Sheila R. Woody, Department of Psychology, University of British Columbia, 2136 West Mall, Vancouver, BC V6T 1Z4 Canada. Email: sheila.woody_at_ubc.ca

Declarations of Interest

Jesse Edsell-Vetter is an employee of the Metropolitan Boston Housing Partnership (MBHP; now Metro Boston Housing). He collected the MBHP data and provided our research team with the de-identified dataset but was not involved in generating research questions for this particular article, data cleaning, analysis, interpretation, or writing of this article.

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Abstract

Domestic squalor is a difficult topic to study; residents of squalid homes are unlikely to volunteer for research due to factors such as stigma or poor insight. Although squalor and hoarding are distinct constructs, extant research suggests squalor occurs more commonly in hoarding than in the general population, but little is known about the circumstances under which squalor develops in hoarded homes. The current study aimed to identify correlates and unique predictors of squalor in the context of hoarded homes based on archival data ($N = 381$) collected in 2010-2014 from three North American community agencies who help clients with hoarding symptoms and squalor. As part of their routine services, each agency completed in-home assessments to evaluate client characteristics (poor insight, social isolation) and conditions of the home (clutter accumulation, poor access to kitchen or bathroom, number of pets). Across sites, degree of clutter accumulation and poor access to the kitchen or bathroom were consistent unique predictors of squalor presence. This research provides a window into the homes of people who struggle with problematic living conditions and suggests that specific conditions of the home are potential risk factors for squalor in the context of hoarding symptoms.

Keywords: hoarding, squalor, community intervention

Hoarding disorder is surprisingly common, with prevalence estimates ranging from 2.3% to 5.8% in the general population (Iervolino et al., 2009; Mueller, Mitchell, Crosby, Glaesmer, & de Zwaan, 2009; Timpano et al., 2011). Although only recently recognized as a distinct diagnostic category in the DSM-5 (American Psychiatric Association, 2013), hoarding has attracted clinical and research interest for decades. This disorder is characterized by persistent difficulties discarding items of seemingly limited value. As a direct result of strong urges to save objects, possessions accumulate and prevent rooms from being used for their intended function, which contributes to impairment or distress. Passive or unintentional accumulation of objects due to factors such as physical disability or cognitive impairment is not considered hoarding (Maier, 2004).

The consequences of hoarding behaviour seep into various parts of life. Accumulated possessions can prevent people from sleeping comfortably in their own bed or cooking food in the kitchen. Some hoarded dwellings fall into disrepair, lack basic utilities, or have issues with cleanliness. Furthermore, the presence of combustible materials near heat sources can pose fire risks to both the resident(s) of the hoarded home and neighbours with shared walls. Large piles of stuff throughout the home also have social implications, as the residents may be too embarrassed to let anyone into the home.

Squalor is distinct from hoarding and is characterized by an accumulation of dirt, grime, or even human or animal waste in the home (Snowdon, Halliday, & Banerjee, 2012). Pest infestations, rotting food, or foul odours are other indicators of squalor. An important part of making a home is managing cleanliness by separating waste from living space (Angus, Kontos, Dyck, McKeever, & Poland, 2005). Neglecting these tasks may be interpreted as challenging cultural values, such as those found in North America, about personal responsibility to prevent disease through care of one's environment (Herskovits & Mitteness, 1994). Across cultures and historical periods, an unsanitary environment has accordingly carried negative associations, such as lack of purity, disorder, and sin (Bushman & Bushman, 1988). Beyond social sanctions,

squalor has implications for quality of life and health (Dong, 2014; Homchenko, Lackie, Morse, & Scott, 2014) and has been associated with increased mortality among older adults (Norberg & Snowden, 2014), although the effects of confounds such as dementia have not been ruled out.

Squalor appears to be rare in the general population, although it is difficult to conduct research on the topic, as residents living in these conditions are unlikely to volunteer for research and even resist offered community interventions (Snowdon, Pertusa, & Mataix-Cols, 2012). Though good estimates of overall prevalence are largely unavailable, Snowdon and Halliday (2011) examined referrals to a geriatric psychiatry team in Australia over a 10-year period and estimated prevalence of moderate or severe squalor to be 0.66% of seniors (adults at least 65 years of age). This estimate is considered to be a lower bound because cases may have been referred to other services and many likely remain unreported.

In contrast, the presence of squalor within hoarding appears to be fairly common, with 56% of hoarded homes also having squalor in one sample of older adults (Kim, Steketee, & Frost, 2001). Among a large sample of clients referred to a community agency because of squalor, Snowdon, Halliday, and Hunt (2013) noted clients who had high levels of filth in the home but no problematic clutter as well as clients who had both squalor and problematic clutter in the home. The combination of hoarding and squalor likely compounds the health and safety risks associated with each of these conditions. Although squalor appears to occur much more frequently in hoarded homes than in the general population, research on squalor and on hoarding has developed along separate lines. Only one study has examined the phenomenon of squalor in the context of hoarding (Kim et al., 2001), and that study relied on retrospective reports from staff members who had intervened in cases of hoarding among older adults. The purpose of the current study is to identify unique risk factors that correlate with squalor within homes that come to the attention of community agencies that address hoarding problems.

When unsanitary conditions are present, feelings of repulsion and disgust, as well as occupational health and safety concerns, may be barriers for community agencies to provide

adequate services to individuals living in hoarded homes. Among one community agency's clients who were approved to receive help for squalor-related issues, 71% were denied services because of occupational health and safety concerns for the workers who would enter the home (McDermott & Gleeson, 2009). This high rejection rate indicates that despite the urgency of these cases, many residents of both hoarded and unhygienic homes may not receive assistance from community agencies. Therefore, an understanding of squalor in the context of hoarding is a critical first step in providing frontline staff with the knowledge and tools necessary to effectively help residents of both squalid and hoarded homes.

What factors might contribute to the development of squalor in the context of a hoarded home? Certainly, the excessive accumulation of objects could be a risk factor, as basic housekeeping would be much more difficult in a home that is full of possessions. In support of this idea, Kim et al. (2001) reported a significant bivariate correlation ($r = .46$) between clutter volume and squalor ratings. More specifically, if bathrooms or kitchens, areas of the home that are used for maintaining personal and domestic hygiene, are inaccessible or in disrepair due to hoarding, then it stands to reason that maintaining basic cleanliness would become difficult. Several studies suggest that functional use of the bathroom may be preserved longer than other rooms as clutter mounts in hoarded homes (Frost, Steketee, & Williams, 2000; Metropolitan Boston Housing Partnership, 2015). Although being unable to use the kitchen or bathroom in a hoarded home is atypical, we would expect that when this situation does occur, the consequences can be far-reaching in terms of hygiene.

Aside from severity of clutter accumulation, we can speculate about other contributors to squalor, including the presence of pets and social isolation. Caring for pets involves daily activities to manage their waste; if pets themselves or the home environment are more generally neglected, unsanitary conditions are likely to develop quickly. Residents who are socially isolated, in the sense of living alone and having no visitors, might also be at higher risk for the development of squalor. Cohabitants can directly intervene when squalid conditions start to

develop, and the prospect of visitors can provide motivation for maintaining clean and functional spaces for socializing in the home.

Poor insight, or an inability to recognize the development of squalor, may serve as a vulnerability factor. Failure to recognize and acknowledge unhygienic conditions would likely accelerate the deterioration of living conditions. Residents with good insight could prevent squalor by taking action before a serious problem develops, except in cases involving other barriers to self-care, such as physical disabilities or memory impairment. Those who fail to recognize the development of unclean conditions are unlikely to take action.

On the other hand, poor insight may follow from, rather than precede, the development of squalor, perhaps as an unconscious dissonance reduction strategy. In a case study of six older adults referred to a community agency for squalid living conditions, Gregory, Halliday, Hodges, and Snowdon (2011) assessed insight and awareness in participants' judgments about domestic squalor represented in newspaper photographs. Five of six participants correctly recognized squalor in the photographs and even expressed concern for the individuals who lived in those homes, but the participants did not recognize their own squalid conditions. Although these findings provide hints that poor insight and squalor are related, additional research with larger sample sizes is necessary before conclusions can be formed.

The present study aimed to identify correlates of squalor in homes that have come to community attention due to hoarded conditions. Accordingly, the study reports on clients who were not research volunteers, most of whom were receiving some community services without having sought the intervention. The study relies on archival data collected during regular in-home assessments by community agency staff at three independent sites in different cities.

Method

Data Sources

The Metropolitan Boston Housing Partnership (MBHP), now called Metro Housing Boston, is a housing advocacy organization in Boston, Massachusetts. The current study's data

were collected from 115 clients in 2012-2014 when MBHP first implemented a Hoarding Intervention and Tenancy Preservation Project. For the most part, MBHP provided services to clients who received government rental subsidies and who were at risk of permanently losing the subsidy due to a lease violation, which would include hoarding or squalor. Clients were at high risk of homelessness if evicted. The project accepted referrals from service providers and family members as well as self-referrals. A highly trained and experienced case manager engaged with residents long-term to achieve harm reduction targets and connect with appropriate community services.

The Hoarding Action Response Team (HART) is a municipal intervention program in Vancouver, British Columbia. HART's priorities are to ensure domestic safety for the clients and their neighbours and to achieve this goal without eviction or prosecution for violation of fire codes for residents of hoarded homes. The HART team receives referrals from a central general hotline, completes in-home assessments, advocates for clients with hoarding problems, provides social support, and uses harm reduction interventions. Data used in this study were collected from 137 clients between January 2011 and April 2014 by four staff members with training and experience in hoarding: two healthcare workers, a fire inspector, and a property use inspector.

The Gatekeepers Program in Hamilton, Ontario works with community partners to identify independently living older adults who are at risk for self-neglect, including individuals struggling with hoarding-related problems. The goal of this Catholic Family Services program is to use client-centered approaches to prevent evictions, homelessness, and unnecessary hospitalization as well as to enhance clients' health and safety. Clients are supported through case coordination, multi-disciplinary intervention, advocacy, problem solving, and long-term monitoring. Case managers and support workers with specialized training collected the data used in this study from 129 clients during 2010-2014.

Participants

Across agencies, data were available for 381 clients. Due to procedural differences across sites, some data were available for only a subset of clients. Female clients outnumbered males by 3:2 at both MBHP and Gatekeepers, whereas significantly more HART clients (53%) were male, $\chi^2 \geq 3.88$, $p \leq .05$. Because the Gatekeepers program specifically served older adults, the mean age ($M = 70.03$, $SD = 8.93$) was significantly higher than at HART ($M = 64.67$, $SD = 12.64$) or MBHP ($M = 56.62$, $SD = 13.05$), which also differed from each other, $F(2, 198.18) = 14.83$, $p < .001$. About 75% of clients in both the MBHP and Gatekeepers samples lived alone. Clients' average monthly income was substantially below the local median household income for both MBHP ($M = \$1,524$, $SD = \$1,451$) and Gatekeepers ($M = \$1,417$, $SD = \$625$).

Consistent with the mandate of MBHP, the vast majority (85%) of their clients were renters, although MBHP occasionally accepted homeowner clients if they were at risk of losing their housing due to hoarding-related problems. The proportion of renters was lower at Gatekeepers (62%) and HART (51%), $\chi^2 \geq 7.42$, $p \leq .006$. Of MBHP clients, 44% were judged to be at risk for eviction, as were 34% of Gatekeepers clients, $\chi^2(1) = 2.26$, $p = .13$.

Measures

HOMES Multidisciplinary Hoarding Risk Assessment (HOMES). The Massachusetts Statewide Steering Committee on Hoarding developed the HOMES (Bratiotis et al., 2011) as a checklist for human services professionals to identify areas of risk in hoarded homes. The HOMES includes problems relevant to client characteristics (e.g., lack of insight) and conditions of the home (e.g., cannot use bathtub/shower, garbage/trash overflow). Both MBHP and HART inspectors used this checklist during initial in-home assessments. Although widely used in community settings, psychometric properties have not been assessed for this tool.

Gatekeepers Structured Intake. The Gatekeepers Program evaluated constructs similar to those of the HOMES with a structured intake assessment conducted in the home. This structured tool included assessor ratings of relevant client characteristics (e.g., insight) and

conditions of the home (e.g., access to functioning shower or bath). The intake also included ratings on a 3-point scale (1 indicating little/no difficulty and 3 indicating extreme/severe difficulty) for four of five questions from the Hoarding Rating Scale (Tolin, Frost, & Steketee, 2010). These items were difficulty discarding, excessive acquisition, distress due to clutter in the home and interference due to hoarding. Directly following these questions, assessors rated the overall hoarding severity on a 1 (none) to 4 (severe) scale.

MBHP Structured Intake. MBHP also used a structured intake form during in-home assessments to assess the presence or absence of specific client characteristics (e.g., presence of friends or family) and conditions of the home (e.g., presence of squalor).

Operationalization of Constructs

Because agencies differed in their approach to assessing constructs relevant to hoarding, operationalization of these constructs for the present study requires explanation. As a first step, we identified variables assessing conditions of the home and client characteristics in each of the three pre-existing community datasets. The availability of data differed depending on the agency; not all sites assessed all constructs. Furthermore, some constructs were measured differently across agencies or had missing data points.

Determination of *squalor* caseness required distinct procedures for each agency. At MBHP, a single highly trained and experienced assessor indicated presence or absence of domestic squalor in each home; this indicator was taken at face value. For Gatekeepers, squalor caseness was operationalized as a rating of 2 (moderate) or 3 (severe) on a 1-3 assessor rating of “unhygienic conditions” in the home. The HART data did not include an explicit rating for squalor, so we operationalized squalor as the presence of at least one of the following (assessed using the HOMES tool): spoiled food, feces/urine, insects/rodents, mold or chronic dampness, or garbage overflow. Several analytic steps justified this operationalization. Factor analyses of HOMES data separately for HART and MBHP confirmed that these five items loaded onto one factor. Relying on the MBHP yes/no indication of squalor as a criterion,

we conducted a Receiver Operator Characteristic (ROC) analysis with the five unsanitary HOMES items listed above to identify the optimal HOMES squalor factor cut-off score for squalor caseness. This analysis of MBHP data showed that the optimal cut-off score was the presence of one squalor-related problem, resulting in a balance of sensitivity (90%) and specificity (72%) in identifying squalor caseness.

The MBHP assessor rated *clutter volume* with the widely used Clutter Image Rating scale (CIR; Frost, Steketee, Tolin, & Renaud, 2008; Tolin et al., 2010). This scale is comprised of nine photographs that depict a room in increasing states of clutter, beginning with a room that is as tidy as an empty hotel room (labeled “1”) and ending with a room that has clutter piled nearly to the ceiling (labeled “9”). Main living areas (bedroom, living room, and kitchen) are rated separately and the average of these main areas is a reliable and valid indication of clutter volume (Frost et al., 2008). Clutter accumulation at Gatekeepers was operationalized as the 1-4 (none to severe) overall “severity of hoarding”, which the assessor rated directly after completing the four Hoarding Rating Scale questions described earlier. Within HART, the HOMES item “cannot sleep in bed” was used as a rough proxy for the presence of generally high clutter accumulation. Within the MBHP dataset, this item from the HOMES was moderately correlated with the CIR average score, $r(110) = .24, p = .01$; no other HOMES item had a significantly higher correlation with the CIR.

Operationalizations of *poor access to kitchen or bathroom* also differed by site. Gatekeepers clients were considered to have poor access to kitchen or bathroom if assessors noted a problem with either *malfunctioning* or *inaccessibility due to clutter* in at least one of the following areas: kitchen sink, bathroom sink, toilet, or shower. At both MBHP and HART, clients were judged to have poor access to kitchen or bathroom if assessors checked off at least one of the following HOMES item: “cannot use stove/fridge/sink”, “cannot prepare food”, “cannot access toilet”, “cannot use bathtub/shower”.

Procedure

Our research team formed partnerships with community-based agencies that address problems related to hoarding and squalor. We were granted access to de-identified archival case data at each agency. Agency staff collected data as a part of in-home assessments with referred clients. Overall, the in-home assessments involved meeting with clients, building rapport and gaining voluntary cooperation, discussing the extent of hoarding problems, evaluating home conditions and client characteristics, and developing plans for intervention and referrals. Each agency independently developed their own assessment strategy (including selecting assessment tools), although both MBHP and HART staff consulted with local researchers about assessment and data collection procedures. Clients did not receive formal diagnoses of hoarding disorder. Community agency staff accepted referrals for clients whose homes had an excessive accumulation of clutter that had developed over a period of time. In cases that involved multiple residents living in a hoarded home, assessors evaluated the situation, identified the resident who was primarily responsible for the hoarded conditions, and worked with the identified individual appropriately.

Results

Based on the operationalization of squalor as described above, squalor was fairly common in these three samples. Gatekeepers had 75 cases (72%) with squalor, which was a significantly higher proportion than at HART (68 cases, or 50%), which was in turn higher than MBHP, which had 39 cases of squalor (35%), $\chi^2 \geq 12.38$, $p \leq .02$. Differences between agencies may be partially attributed to the differing operationalization of the construct squalor across agencies. For example, the Gatekeepers estimate includes moderate and severe cases of squalor, whereas the severity threshold for caseness at MBHP is unknown. What is clear, however, is that squalor is highly prevalent, but far from ubiquitous, in hoarding cases. Table 1 presents additional summary data for each site.

MBHP

A logistic regression analysis was conducted to predict squalor cases from CIR average score, poor access to kitchen or bathroom, number of pets, poor insight, social isolation, and HOMES mental state items, $\chi^2(8) = 43.48$, $p < .001$, $R^2 = .50$. Both clutter volume and poor access to kitchen or bathroom were unique predictors of squalor caseness, but the remaining predictors were not. Risk for squalor increased nearly five-fold if the home had poor access to kitchen or bathroom, as shown in Table 2. The risk of squalor doubled for every point of increase on the CIR.

HART

A logistic regression analysis was conducted with being unable to sleep in the bed, poor access to kitchen or bathroom, number of pets, poor insight, and HOMES mental state items as unique predictors of squalor presence, $\chi^2(7) = 32.30$, $p < .001$, $R^2 = .29$. Similar to the MBHP results, odds ratios (shown in Table 2) suggest the risk of squalor was increased at least five-fold if clients had poor access to a kitchen or bathroom or could not sleep in their beds. Consistent with the proxy assessment of clutter volume for the HART data, the confidence interval for the odds ratio estimate is very large.

Table 1*Conditions of the Home and Client Characteristics by Agency*

Measure	N	Frequency (%) or Mean (SD)				
		MBHP	N	HART	N	Gatekeepers
Rental Unit	112	95 (85%)	130	66 (51%)	125	77 (62%)
Living in Multifamily Building	112	81 (72%)	118	77 (65%)	125	84 (67%)
Presence of Squalor*	113	39 (35%)	137	68 (50%)	104	75 (72%)
Clutter Volume						
Clutter Image Rating (0-9)	112	4.16 (1.63)				
Cannot Sleep in Bed (Y/N)			137	25 (18%)		
Hoarding Severity (1-4)					129	2.76 (0.79)
Poor Access to Kitchen or Bathroom	115	38 (33%)	137	58 (42%)	91	33 (36%)
Number of Pets	111	0.37 (0.81)	137	0.27 (0.72)	119	1.39 (3.43)
Poor Insight	115	52 (45%)	137	68 (50%)	129	2.74 (0.96)
Social Isolation						
No Friends or Family	103	34 (33%)				
Self-report Social Connectedness					121	3.48 (0.80)
HOMES Mental State						
Anxious/Apprehensive	115	44 (38%)	137	56 (41%)		

Measure	Frequency (%) or Mean (SD)					
	<i>N</i>	MBHP	<i>N</i>	HART	<i>N</i>	Gatekeepers
Angry/Defensive	115	37 (32%)	137	45 (33%)		
Confused	115	13 (11)%	137	22 (16%)		

Note. At Gatekeepers, the range was 1 (little or none) to 4 (severe) for hoarding severity, 1 (fully aware) to 4 (no insight) for insight, and 1 (very poor) to 5 (excellent) for social connectedness (self-reported). Squalor presence was determined by experienced case manager judgment (Y/N) at MBHP; presence of one of the following at HART: spoiled food, urine/feces, insects/rodents, mold or chronic dampness, or garbage overflow; and case manager judgment of moderate or severe unhygienic conditions at Gatekeepers.

Table 2*Site-Specific Regression Results for Predictors of Squalor Across Agencies*

Predictor	<u>MBHP</u> N = 95		<u>HART</u> N = 130		<u>Gatekeepers</u> N = 84	
	Odds Ratio	95% CI	Odds Ratio	95% CI	β	95% CI
Clutter Volume	2.06*	[1.39, 3.02]	5.91*	[1.78, 19.64]	0.08	[-0.13, 0.19]
Poor Access to Kitchen or Bathroom	4.94*	[1.51, 16.21]	4.78*	[2.11, 10.87]	0.32*	[0.10, 0.53]
Number of Pets	1.42	[0.79, 2.53]	1.00	[0.57, 1.73]	-0.08	[-.28, 0.11]
Poor Insight	1.18	[0.30, 4.68]	0.53	[0.23, 1.25]	0.25*	[0.06, 0.45]
Social Isolation	0.45	[0.14, 1.14]			-0.18	[-0.38, 0.01]
HOMES Mental State						
Anxious or Apprehensive	2.21	[0.71, 6.84]	1.22	[0.52, 2.86]		
Angry or Defensive	0.59	[0.14, 2.38]	0.93	[0.39, 2.24]		
Confused	3.05	[0.53, 17.73]	2.03	[0.65, 6.36]		

Note: * indicates $p < .05$. Site-specific multivariate analyses were conducted to investigate unique predictors of squalor. Logistic regression results are presented for MBHP and HART categorical operationalization of squalor; multiple regression was used for Gatekeepers dimensional squalor data.

Gatekeepers

A multiple regression analysis conducted on the Gatekeepers data showed that the overall model using hoarding severity, poor access to kitchen or bathroom, number of pets, poor insight, and social isolation significantly predicted squalor severity, $F(5, 79) = 5.54, p < .001$,

adjusted $R^2 = .21$. As shown in Table 2, both poor access to kitchen or bathroom and low insight uniquely predicted squalor severity. Hoarding severity, number of pets, and social isolation were not unique predictors of squalor severity.

Discussion

The overall aim of this study was to identify predictors or correlates of squalor in three ample diverse samples of clients who have come to community attention due to hoarding-related problems. The presence of squalor at all three sites was consistently predicted by poor access to a functioning kitchen or bathroom. Squalor was also more likely to be present in homes that had high clutter volume - as indicated by clutter ratings, inability to sleep in the bed, or overall clinician impression. Squalor was uniquely predicted by poor insight at Gatekeepers, but not at the other sites.

The current study provides strong evidence that squalor is relatively frequent among adults who struggle with hoarding symptoms. Squalor prevalence rates (35-72%) were consistent with a previous study of older adults aged 65 to 92 (56%; Kim et al., 2001). At first glance, the overall pattern of study results imply that squalor status could be linked to increasing age, as both squalor presence and age were lowest at MBHP (age $M = 57$, squalor presence = 35%), significantly higher at HART (age $M = 65$, squalor presence = 50%), and highest at Gatekeepers (age $M = 70$, squalor presence = 72%). However, within-site analyses revealed that age was not significantly correlated with squalor presence, $-.18 \geq r \geq .10$. Given these findings, increasing age is unlikely to be a risk factor for squalor. More likely, the differences in squalor prevalence across sites reflect the different mandates and clients for the agencies. Though each agency deals with problems related to hoarding and squalor, the circumstances that bring clients to the agencies' attention can differ greatly. Recall that HART is mainly concerned with household fire risk, MBHP with renters at risk of losing their housing subsidies, and Gatekeepers with older adults at risk for self-neglect. Although all the clients had problems with hoarding symptoms, they differ in other ways that may represent risk factors for squalor.

Consistent with the study hypotheses, hoarding severity and difficulties using the kitchen or bathroom uniquely predicted squalor across multiple sites. High clutter volume prevents residents from accessing spaces to clean the home, which would contribute to difficulties in maintaining household hygiene. Importantly, these findings also suggest that poor access to or malfunction of specific rooms essential for basic cleanliness (i.e., kitchen or bathroom) is uniquely associated with squalor above and beyond clutter volume alone. Interestingly, this is the first study to suggest that specific patterns of problematic areas could be a risk factor for squalid conditions in hoarded homes.

Lack of insight into the severity of potential consequences of poor conditions in the home uniquely predicted squalor severity only at Gatekeepers. The relation between insight and poor conditions in the home, including squalor, is probably not straightforward. For example, although people who are fully aware of early indications of squalor are likely to take steps to address the problem, other barriers, such as poor motivation, may prevent action. Additionally, if squalor develops incrementally, the resident may habituate to poor hygiene over time. Furthermore, assessor judgments of insight may be spuriously influenced by conditions in the home (e.g., “Surely she does not see how bad it is in here or she would take some action, so her insight must be low”). Finally, insight is dynamic rather than static. Practically speaking, clients may indeed have good insight when a compassionate assessor is discussing conditions in the home yet be unable to recognize the seriousness of the situation when alone or when mood is low. Because insight does seem to be important for taking consistent action to improve conditions in the home, this factor deserves more research attention, particularly in combination with social isolation, as having an independent (compassionate) perspective could strengthen insight and motivate clients to change.

Social isolation was not a unique predictor of squalor, a result that was consistent across sites. This finding is surprising. We expected that squalor would be less likely to develop if cohabitants were available to intervene. In fact, follow-up within-site bivariate analyses showed

that living alone was not a risk factor for squalor, $\chi^2 \leq 2.69$, $p \geq .10$. Specifically, among MBHP and Gatekeepers clients who lived with others, 23% and 67%, respectively, had squalor present in the home. This contradicts the stereotype of residents of squalid homes as reclusive. We also expected social connectedness to be related to squalor because the prospect of visitors to the home would provide motivation to keep living spaces clean and social isolation would eventually become a consequence of squalor as the frequency of visitors would decline with worsening conditions in the home. Unfortunately, no agency measured this specific construct – whether other people regularly enter the home. Future research could assess the relation between squalor and frequency of visitors (e.g., weekly, monthly, yearly).

That number of pets was not a risk factor for squalor was also surprising, as having multiple pets in the home logically creates challenges in maintaining hygiene. However, our findings suggest sheer number of pets is not by itself a good predictor of squalor. Notably, these samples did not include cases of animal hoarding. Given the importance of pets for humans' quality of life as well as consideration of the pets' own welfare, future research should examine factors that are related to the neglect of general self-care in humans, as these factors likely also play a role in the resident's abilities to care for their pets as well as the home.

Unexpectedly, client mental state did not uniquely predict squalor, suggesting that residents of hoarded homes with squalor are no more anxious, defensive, or confused than residents with no squalor in their hoarded homes. These findings contradicted our expectations, which were that the presence of squalor would give rise to more negative emotions and confusion when others enter the home in comparison to homes that are only hoarded. We particularly expected this result given that poor insight was not significantly associated with squalor. Practically speaking, these results paint an optimistic picture for both community agency staff and clients; residents of unsanitary hoarded homes may be no more difficult to work with than residents of hoarded homes without squalor.

The main strength of the current study was that we examined data from three diverse community agencies that served clients who were typically not seeking help with their hoarding problems. Study data were systematically collected by experienced professional assessors during in-home assessments. Generalizability was bolstered by replication across sites of clutter volume and poor access to kitchen or bathroom as risk factors for squalor. Although in many ways it would have been preferable had the agencies operationalized constructs in the same way, diversity in measurement also strengthens confidence in results that were consistent across sites.

The strong external validity came at a cost to internal validity. The community agency data were collected to facilitate and track interventions rather than for bespoke research purposes. Although the HOMES is a convenient and efficient tool to assess conditions in the home and communicate among professionals from different disciplines, its checkbox format leads to some ambiguity, as lack of a checkmark could indicate no problem for that item or it could represent missing data. However, given that community agency staff express a preference for forms (such as the HOMES) that are easy to use and we still found replicable results across agencies, our findings are likely representative of consistent factors that front-line staff find important to identify and target in hoarded homes within the community.

To better understand how squalor develops in hoarded homes, future research could focus on potentially important predictors that we were unable to examine in the current study. For example, the presence of comorbid psychopathology affecting self-care may be one risk factor for squalor, as Snowden and Halliday (2011) found that some types of psychopathology, such as depression, occurred frequently among people living in squalid homes. Moreover, several studies have suggested links between impaired executive functioning and squalor (Aamodt, Terracina, & Schillerstrom, 2015; Gregory et al., 2011; Schillerstrom, Salazar, Regwan, Bonugli, & Royall, 2009).

The study findings have important implications for both front-line workers and researchers. Given that a high proportion of hoarded homes were also squalid in our samples, ensuring that front-line staff who work with hoarding symptoms in the community have the tools and knowledge necessary to effectively help clients in both hoarded and squalid homes is essential. Currently, no practice guidelines exist to assist front-line workers when dealing with hoarding symptoms and squalor cases. Consistent with our findings, intervention plans should prioritize decreasing household clutter levels and ensuring that kitchens and bathrooms are functional and accessible within the home. Notably, this study provided a window into the homes of individuals who struggle with hoarding symptoms and clients who would usually be inaccessible to researchers. Investigating this atypical research population helps bridge the gap between hoarding research involving volunteers and the clients that front-line staff encounter regularly in the community.

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