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Stronger Impact of Interpersonal Aspects of Satisfaction Versus Tangible Aspects on Sustainable Level of Resident Loyalty in Continuing Care Retirement Community: A Case Study

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Abstract: The objectives of the study were to examine the impact of interpersonal and tangible aspects of resident satisfaction on word-of-mouth (WOM) intention in community-embedded third places with long-duration service experiences and to investigate the mediating effect of interpersonal aspects on the relationship between tangible resident satisfaction and WOM intention. Paper-based survey questionnaires and postage-paid envelopes were mailed to 293 continuing care retirement community (CCRC) residents. Reliability and validity of the multidimensional construct of resident satisfaction were ensured through confirmatory factor analysis. Hierarchical regression analysis and MANOVA were used to test the hypotheses. A total of 157 completed surveys were received. Analysis showed that two categories of resident satisfaction were statistically distinct. Interpersonal aspects of resident satisfaction (resident involvement, social interaction, and staff care) positively impacted WOM intention more than the tangible aspects (room, home, and meals service). The relationship between tangible resident satisfaction and WOM intention was mediated by interpersonal aspects of resident satisfaction. This study contributes to the literature by (1) examining the mediating effect of interpersonal resident satisfaction between tangible satisfaction and WOM intention in community embedded third places and by (2) exploring the role of non-traditional third places, (i.e., third places nested within residential community settings) as opposed to conventional types (i.e., individual commercial settings). Thus, it addresses the call for research on permanent residents with long-duration service experiences and the effect of one location nested within another.

Keywords: embedded third places; resident satisfaction; long-duration service experiences; word-of-mouth (WOM); continuing care retirement community (CCRC)

1. Introduction

Increased average life expectancy has heightened the need for a social system and long-term care services for older adults [1]. The United States Department of Health and Human Services (HHS) estimates that nearly 70% of those in this aging category (above 65) will need some form of long-term care, including appropriate types of housing and supportive care services in senior health care communities [2]. Senior health care communities include independent or active living, assisted living (AL), skilled nursing (nursing home), memory care, and continuing care retirement communities (CCRCs). CCRCs combined independent living, AL, and skilled nursing homes, including memory care. Active and healthy older adults can reside independently in single-family homes, apartments, or condominiums, called independent living communities. When they need assistance with everyday activities, they can move into AL or a nursing home within a CCRC. Thus, CCRC residents live in one

location for the duration of their life with the enhanced security of knowing their future care is already planned for [3].

CCRCs provide various types of services including but not limited to onsite pharmacy, insurance billing, banking, a swimming pool, health/wellness, fitness, a salon, onsite nursing/physician, physical therapy, water aerobics, art classes, game rooms, meals, transportation, recreational therapy, onsite counseling, and home health care [4]. CCRC residents voluntarily utilize these services based on their interests and needs. For instance, CCRC residents may spend their time and enjoy social activities with other residents and employees while eating meals in a dining room, playing games in a lounge, or attending classes/exercises provided in the community. A CCRC essentially provides physical, medical, and mental health care services within one community [1]. In other words, many different types of third places are embedded within a CCRC.

Third places are defined as "public places that host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work" [5]. Examples of third places are coffee shops, cafés, restaurants, bars, pubs, taverns, community centers, churches, parks, and outdoor recreation spots, where consumers purchase products and/or services and spend their time enjoying social interaction with friends and/or employees outside the home and workplaces. The relational theory of third place [6] offers a framework for understanding why and how such spaces are formed by examining a chain of causal effects linking the following three concepts: (a) physical, social, and emotional needs of consumers as the starting point, (b) place meaning, i.e., place-as-practical, places-as-gathering, and places-as-home, and (c) consumer loyalty outcomes consisting of behavioral intentions, satisfaction, and loyalty.

A recent study [7] was the first effort at understanding why and how a CCRC becomes a host of meaningful third-place activities for senior residents based on the relational third place theory [6]. Results of the study suggested that resident needs (tangibles, instrumental, and emotionally supportive resources) positively influenced place meaning, and place meaning in turn positively affected resident loyalty outcomes. The construct of place meaning, consisting of trust, comfort, safety, and the ability to make friends in a CCRC, was proposed and empirically tested.

The characteristics (ambient conditions, design, and social support resources) of these third places may affect customers/residents' feelings, thoughts, activities, experiences, and lifestyles differently [6,8]. This may be especially true in a CCRC, as residents stay with the community for the long term and have a long-duration service experience. These long-term service experiences are unique in that continuous service experiences and interaction activities in a CCRC create "linking values" for residents. Currently, little research is available on these unique characteristics of CCRC experiences resulting from long-term service experiences including human interaction and engagement (particularly the higher level of interpersonal dimension and the effects of one location nested within another) [8]. Opinions and comments from current long-term residents based on their cumulative service experience are trustworthy and critical for potential residents and their family who influence the final decisions. Therefore, measurement and improvement of word-of-mouth (WOM) intention of residents would be of significant interest to the management of CCRCs for sustainable recruitment of new residents. Conceptually, WOM is part of behavior intentions, which are loyalty outcomes [9]. Therefore, the level of loyalty from the CCRC residents would manifest itself as WOM intentions, which were surveyed in this study.

This study examines the relative effects of the interpersonal versus tangible aspects of long-term residency on WOM intention in embedded third places inside a CCRC and investigates whether the interpersonal aspects mediate between the tangible aspects of resident satisfaction and WOM intention.

Understanding the specific aspects of permanent (not temporary) residents' satisfaction in one location nested within another and assessing the impact of their satisfaction (tangible vs. interpersonal) on their WOM intention should provide valuable insights into (1) understanding the characteristics of multidimensional resident satisfaction and (2) formulating managerial strategies that enhance the customer appeal of a CCRC and ensure optimal resource investments for improving resident loyalty.

Better quality of services in these places will improve the quality of life and well-being of the residents, which will in turn lead to higher level of life satisfaction and finally WOM advertising to others who may have family members, friends, or who are themselves potential residents of such communities. The findings of this study also contribute to theory in the following ways: (1) this study conceptually differentiates tangible aspects of resident satisfaction from interpersonal aspects of resident satisfaction; (2) it empirically tests the impact of tangible versus interpersonal aspects of resident satisfaction on resident WOM intention and the mediating effect of interpersonal resident satisfaction between tangible resident satisfaction and resident WOM in a CCRC; (3) it addresses the call for research to better explore residential characteristics with long duration service experiences in an unique type of place, with one location nested within another [6,8,10].

2. Theoretical Background and Research Hypotheses

2.1. Application of the Relational Theory of Third Places in a CCRC Setting

The meanings of certain business establishments (places) changes "from a place of consumption to a place of significance" [6]. For instance, consumers eat and drink at restaurants and cafés; they also enjoy the companionship of friends and colleagues in the comfortable and friendly settings of the places. These places are known as third places. According to the relational third-place theory framework [6], older consumers attach meanings to a particular place based on their ability to satisfy consumption (i.e., food, prices, ambient conditions, layout of the place), social, and emotional needs through companionship and emotional support resources in the particular place. In other words, restaurants are not simply a place for eating food, but rather a place of obtaining companionship and emotional support. More specifically, each individual can attach deeper meanings to a place, and these meanings can be categorized into three types: place-as-practical, place-as-gathering, or place-as-home. The perceived meanings of the place influence customers' loyalty to the place [6,7,11].

Krout et al. [12] summarize the value proposition of CCRCs in the following words: "CCRCs guarantee lifetime access to housing and health care in return for an up-front 'buy-in' cost and fixed monthly fees. Marketed to more affluent older adults, CCRCs provide residents a continuum of care —from independent living to skilled nursing care—in one setting. Residents may thus age in place without fear of being unable to obtain or afford care and without having to move or be dependent on family" (p. 237). Reasons for relocation to a CCRC are varied: to meet existing needs for appropriate housing, participate in planned social activities and recreational opportunities, seek relief from loneliness, and to ensure that the future needs for care will be met with minimal burdens to the family. Residents utilize various types of services including health care and medical services at one place for their convenience and obtain assistance for their daily activities [12]. Physical environments with safety and security such as physical facilities, updated equipment, and cleanliness are the fundamental components of a CCRC. These items contribute to the notion of place-as-practical. Residents socialize with other residents by joining clubs, playing games, doing exercise, shopping together, and attending religious activities and classes based on their personal interests. They can establish friendship and companionship through these activities. In this way, a CCRC provides social support resources to diminish loneliness, which contributes to the idea of place-as-gathering. Residents consider CCRCs as their final residence. Feelings of comfort, trust, safety, home, and a sense of belonging at a CCRC play a vital role in forming the place meaning and instilling a sense of loyalty to the community. In this way, the CCRC is perceived as place-as-home [6,7].

Key relationship barriers within CCRCs, however, may be the stigma associated with disability and/or physical and mental health decline, especially cognitive impairment [13,14]. Moving to long-term care communities such as CCRCs or AL could accompany different types of losses and separations, such as loss of independence, loss of a spouse or longtime friends, and declining health and function [14,15]. Further, moving from an independent living setting to AL or from AL to a health center (nursing home) or a place for dementia within a CCRC is typically associated with

loss of independence, fears, and negative emotions, which contribute to the stigma linked to decline and functional impairment in CCRCs [14,16,17]. Additionally, CCRC residents become depressed on account of other residents suffering from illnesses and/or passing away.

Since residents in these communities stay on a long-term basis and consider the place as their final residence, their living communities mean a lot to them on the emotional level [7,12]. Thus, place meanings of practical, gathering, and home directly influence loyalty outcomes [6,7].

2.2. CCRCs as Community-Embedded Third Places with Long-Duration Service Experiences

A CCRC setting is unique in that the community includes many third places by providing different types of services. In addition, CCRC residents stay with the community as permanent residents and have long-duration service experience. The combined effect of different types of resident satisfaction within embedded third places on resident loyalty can provide significant insights into understanding of the characteristics of this unique environment.

To explore continuous or nested servicescapes (characteristics) of a place within a community, a recent study proposed and tested the concept of "servicescape effects transference", explaining that "in the case of nested servicescapes, the image, impressions, perceptions, and associations of one physical and biotic environment may be transferred to, or affect, another contiguous one" [8]. Their study found that perceived nestscape (the servicescape of a mobile home/recreational vehicle community) satisfaction and surroundscape (the community's surrounding regional servicescape) satisfaction positively impacted loyalty intentions in active adult communities frequented by older consumers (over 55+) during the winter, called seasonal migrant communities. These seasonal migrants' attachment to the community is linked to the "meaning of environmental quality and escape from day-to-day cares", while permanent residents' attachment to the community is based on "social networks and community meanings" [8,18]. Given the different meanings of place attachment between seasonal and permanent residents and the dearth of studies on residential servicescapes as well as the effects of one location nested within another [8], research on third places within a CCRC, providing social interaction and supports to permanent residents, is crucial.

2.3. Tangible versus Interpersonal Aspects of Resident Satisfaction in a CCRC

Like customer satisfaction, resident satisfaction in this study is defined as the satisfaction of residents who live in CCRCs including the independent living community, AL, and skilled nursing home. Residential satisfaction focuses on long-term or residential aged care rather than general life satisfaction or broader aspects of quality of care [19]. Because CCRCs provide different types of services including health care, food, lodging, daily activities, and educational services, the multidimensional satisfaction construct seems appropriate to examine distinguished residential satisfaction in long-term aged care services. This study uses the multidimensional construct of resident satisfaction in long-term care settings developed by Chou et al. [19].

Using a sample of 1146 residents in 70 residential aged care facilities in Australia, Chou et al. [18] developed six dimensions of resident satisfaction: room, home, social interaction, meals service, staff care, and resident involvement. More specifically, the aspect of *room* satisfaction included room size, amount of storage space, and bathroom facilities. Home satisfaction covered the community's design for getting around, the lounge area, the dining area, and the outside areas. Meals service included the variety of food, quantity, temperature of food, and meal times. Social interaction was based on having enough things to do, social life in the community, and being able to keep in touch with life outside. Staff care satisfaction consisted of staff attitude toward residents, staff's respect for residents' privacy, and the promptness with which staff responds to residents' calls for help. Resident involvement included keeping the residents informed about aspects that may affect them, providing them enough opportunities to convey their views to the management, and feeling comfortable about approaching the staff to discuss a concern [19].

2.4. Hypotheses Development

This study extended the well-known link between customer satisfaction and WOM in marketing [20,21] to examine the effect of "permanent" resident satisfaction (tangible vs. interpersonal aspects) on WOM intention in community-embedded third places with long-duration service experiences. The construct of loyalty was considered to include cognitive loyalty, affective loyalty, intention (conative) loyalty, and behavioral loyalty [22]. Intention loyalty includes WOM, defined as intention to revisit, recommend, and share positive information about the product/service/property [23]. WOM is a non-commercially originating person-to-person communication method and is perceived as more credible than paid advertising methods [21]. These days, users of services and products have become opinion leaders [23] because of the influence of social networking technologies. Residents in a CCRC typically stay on a long-term basis in their community and consider the CCRC as their final residence. Therefore, positive WOM from current residents is a trustworthy source of information for potential residents and their families who typically influence the final decisions [7]. In addition, highly satisfied customers are more likely to engage in positive WOM [20].

Older adults may face loneliness socially and experience emotional loneliness because of the loss of loved one, physical illness, and retirement from work—events that lead to unexpected reduction in their social support system. Seniors who find a third place or support structure to fill the support gap have been shown to have better health and longevity [11,24,25]. Thus, third places within CCRCs play a crucial role in meeting or exceeding the residents' needs for social and emotional support. Social and emotional support through social interaction, staff care, and resident involvement in these communities can positively influence residents' quality of life and well-being [7,24].

Tangible aspects, such as physical facilities and environments, may be important when residents look for a CCRC or at the beginning of residents' lives in the CCRC. As residents stay with the community for long durations, their needs are expected to shift from the tangible aspects toward the interpersonal aspects (i.e., social interaction and engagement) because of the decaying effect [8,26] and the demanding needs for social and emotional support. CCRC residents get accustomed to the design and ambience in the community with time through the habituation effects, defined as a "decreased response to repeated stimulation" [8,26]. Further, third places are significantly meaningful to older adults because of the social relationships associated with and attached to the place rather than the place per se [6]. Therefore, interpersonal aspects of resident satisfaction are likely to impact WOM more than tangible aspects, and they are likely to mediate the relationship between tangible aspects of resident satisfaction and WOM. This understanding leads to the following hypotheses:

Hypothesis 1. *Interpersonal aspects of resident satisfaction will positively impact WOM intentions more than tangible aspects of resident satisfaction in community-embedded third places with long-duration service experiences.*

Hypothesis 2. *The relationship between tangible aspects of resident satisfaction and WOM intentions will be mediated by interpersonal aspects of resident satisfaction in community-embedded third places with long-duration service experiences.*

3. Methodology

3.1. Sample and Data Collection

The setting for this research was a CCRC located in the southeastern part of the United States. This CCRC is a non-profit and affiliated with a religious organization. It serves more than 300 residents, via four different types of communities, namely, residential (independent living), apartment (independent living), assisted living (AL), and health center (nursing home). The researchers received 293 mailing addresses of the CCRC residents who met the following selection criteria: they had sufficient cognitive competence and a minimum level of health and energy for participation in the survey.

A focus group consisting of six CCRC experts and two hospitality services department faculty members reviewed the draft of the survey questionnaire. The experts panel consisted of administrators including the Executive Director, Director of Marketing, Registered Nurse (RN), and three supervisors in independent living communities and AL. They have been working in senior living communities for more than ten years, while three of them have been working in the industry for more than 30 years. On their suggestion, minor revisions were made to the questionnaire, including the use of a bigger font size and the alteration of certain words to improve the face validity of the instrument.

Prior to distributing the surveys, the instrument and distribution procedures were approved by the Institutional Review Board (IRB) of the Committee on the Use of Human Research Subjects. Residents were informed about the project by the CCRC manager or caregivers. A total of 293 paper survey questionnaires with a cover letter and postage paid envelopes were mailed to the CCRC residents. Resident participation was voluntary with the assurance that individual results of the survey would be kept anonymous. Residents had to be over 55 years old and could send back their completed surveys to the researchers directly or could drop them, sealed in an envelope, in a locked box located in the dining hall corridor. The locked box was chosen due to its easy access to all the residents. Researchers were the only ones with access to the locked box. Two weeks later, the researchers went to the CCRC and collected the surveys.

Of the 293 surveys distributed, 157 responses were received, yielding a response rate of 53.6%. The majority of the respondents (66%) were female with ages ranging from 61 years to 106 years. The mean age was 82.8 years. About 98% of the respondents were white. About 82% of respondents stayed in the residential and apartment communities, where independent seniors live. Most of the respondents (90%) had been living in the CCRC for more than one year. As for the respondents' education background, 26.7% had a bachelor's degree and 32.8% had a graduate degree. In terms of income level, about 36% of respondents had annual household income in the range of $40,000–$74,999, and about 30% had annual household income of $10,000–$39,999.

3.2. Measures and Data Analysis

The survey was designed to measure (1) how the CCRC residents were satisfied with the six aspects of resident service measures in the CCRC and (2) the degree of willingness of the residents to provide WOM for the CCRC, using a seven-point Likert scale anchored by 1 and 7 (1 = poor to 7 = excellent and 1 = not satisfied to 7 = very satisfied). The multidimensional concept of resident satisfaction included satisfaction with room, home, social interaction, meals service, staff care, and resident involvement [19,27]. The six dimensions of CCRC resident satisfaction were categorized to two aspects: tangible and interpersonal resident satisfaction. Among the six dimensions of resident satisfaction, both room and home satisfaction dimensions were related to design and ambience, also known as physical/built environment or servicescape and physical stimuli [6,8]. Meals service satisfaction included food and meal times (i.e., variety of food, amount of food, temperature of food, and meal times) but excluded any human interaction component. This category of tangible aspects of resident satisfaction consisted of the above dimensions, i.e., room, home, and meal services [18]. The remaining three dimensions of the resident satisfaction—social interaction, staff care, and resident involvement—involve human interaction and engagement with residents and employees [6,8]. Thus, they were categorized as "interpersonal" aspects of resident satisfaction (Figure 1).

From these six first-order factors, the level of multidimensional resident satisfaction was derived as a second-order latent variable. The specific items used in this study for measuring the six dimensions of resident satisfaction are presented in Table 1. One item in staff care, "How would you rate the help you received from the community at the time you moved in?", from the original study [18], was not used for data analysis, because more than half of the participants did not respond this question. This could be possibly because participants could not remember how much help they received at the time of the survey. The majority of participants (90%) had been living in the community for more than 1 year (i.e., 41% had stayed for more than 6 years, and 22% had been there for 3–5 years).

According to the three-indicator rule assuming "congeneric measurement models in which all constructs having at least three indicators are identified" [28], a minimum of three items (less than a dozen items) for a construct can provide a theoretical definition of the construct with evidence of unidimensionality [28]. Thus, the range of items in all constructs in this study is three to four, which satisfies the three-indicator rule.

To measure WOM intention of residents, the survey included three measurement items (Table 2), which were adapted from the previous study [29]. To test the reliability and validity of resident satisfaction, the Cronbach alpha coefficient (α), correlation estimates between constructs, composite reliabilities (CR), and average variance extracted (AVE) were estimated (Table 1).

A second-order latent variable representing multidimensional resident satisfaction was derived from the six dimensions of satisfaction through confirmatory factor analysis (CFA). The following goodness of fit criteria were used to assess model adequacy: normed chi-square (χ^2/df) < 3, comparative fit index (CFI) > 0.90, Tucker Lewis Index (TLI) > 0.90, root mean square error of approximation (RMSEA) < 0.80 [28]. Finally, hierarchical regression analysis and MANOVA were used to examine the effects of tangible and interpersonal aspects of resident satisfaction on WOM intention and the mediating effect of interpersonal aspects between tangible resident satisfaction and WOM intention. These analyses provide the three following equations and coefficients: first, regressing the mediator (i.e., interpersonal aspects) on the independent variable (i.e., tangible aspects); second, regressing the dependent variable (i.e., WOM intention) on the independent variable; and third, regressing the dependent variable on both the independent variable and on the mediator [30,31].

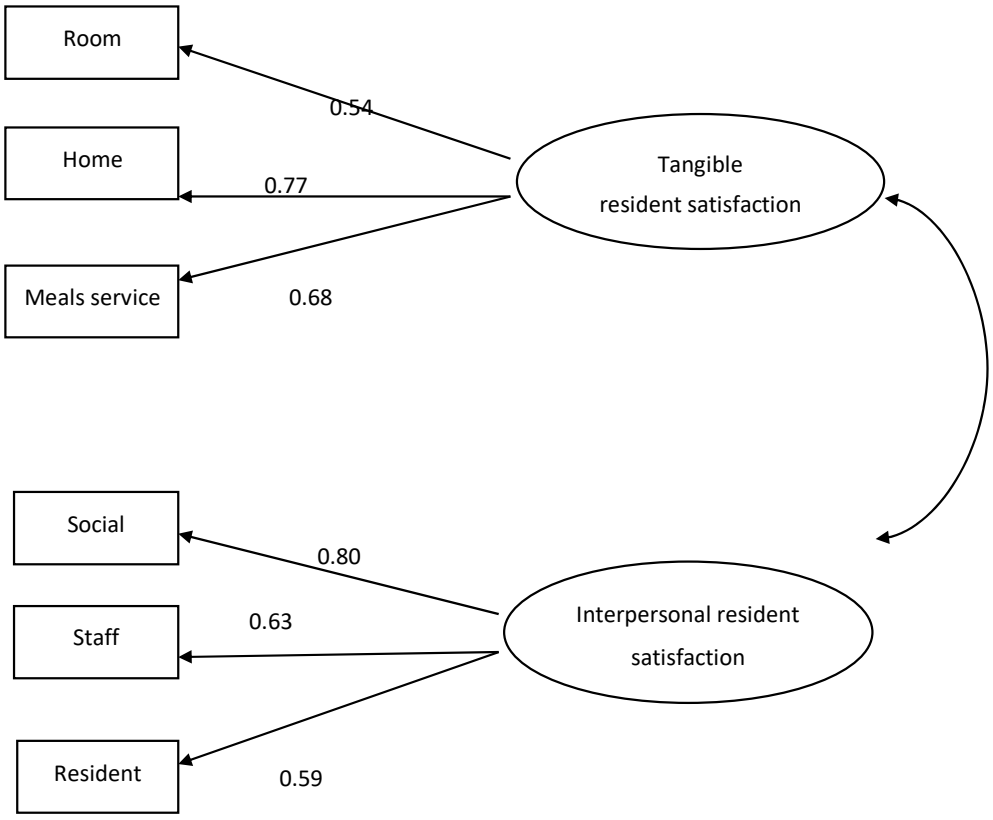


Figure 1. Two categories of resident satisfaction in a CCRC.

Table 1. Measurement model results for constructs. (Notes: n = 157, Measurement items are scored on a 7-point Likert scale (1 = poor to 7 = excellent; 1 = strongly disagree to 7 = strongly agree). CR: Composite Reliabilities; AVE: Average Variance Extracted. Overall fit measures: χ^2/df = 1.555, CFI = 0.954, TLI = 0.942, RMSEA = 0.060, CFI = Comparative Fit Index; TLI = Tucker Lewis Index; RMSEA = Root Mean Square Error of Approximation.).

Construct and Scale Items	Mean (SD)	Factor Loading	CR	AVE
Resident satisfaction				
Room (α = 0.816)			0.888	0.599
R1: Room size	6.2 (1.0)	0.734		
R2: Amount of storage space	5.7 (1.4)	0.798		
R3: Bathroom	6.1 (1.2)	0.789		
Home (α = 0.817)			0.882	0.533
H1: Its design for being able to get around easily	5.7 (1.2)	0.637		
H2: The lounge area	6.1 (0.8)	0.887		
H3: The dining room	5.9 (1.1)	0.740		
H4: The outside areas	6.1 (1.0)	0.624		
Social interaction (α = 0.878)			0.932	0.714
S1: Having enough things to do	6.1 (0.9)	0.879		
S2: Social life in this community	6.0 (1.0)	0.832		
S3: Being able to keep in touch with life outside	6.2 (0.8)	0.823		
Meals service ((α = 0.857)			0.913	0.607
M1: Variety of food	5.6 (1.3)	0.747		
M2: Amount of food	6.3 (1.0)	0.844		
M3: Temperature of food	5.9 (1.2)	0.875		
M4: Meal times	5.9 (1.2)	0.625		
Staff care (α = 0.848)			0.913	0.672
C1: Staff attitude toward residents	6.4 (0.8)	0.930		
C2: Their respect for residents' privacy	6.4 (0.8)	0.839		
C3: The promptness with which they respond to residents' calls for help	6.2 (1.0)	0.667		
Involvement (α = 0.813)			0.900	0.628
I1: Keep residents informed enough about things that may affect them	5.7 (1.2)	0.842		
I2: Have enough opportunities to put residents views to the management	5.5 (1.7)	0.806		
I3: Feel comfortable about approaching staff to discuss a concern	5.9 (1.4)	0.724		
WOM (α = 0.963)			0.981	0.900
W1: I will recommend this community to other people.	6.4 (0.9)	0.962		
W2: I will encourage other people to choose this community.	6.4 (1.0)	0.979		
W3: I will say positive things about this community to other people.	6.4 (0.9)	0.903		

Table 2. Correlations and squared correlations between constructs. (Notes: α = Cronbach coefficient alpha, Values below the diagonal are correlation estimates between constructs. * Values shown in italics above the diagonal are squared correlations).

Construct	Cronbach's α	1	2	3	4	5	6	7
1. Room	0.816	1.00	*0.307* *	*0.229* *	*0.110* *	*0.236* *	*0.082* *	*0.089* *
2. Home	0.817	0.554	1.00	*0.444* *	*0.310* *	*0.300* *	*0.162* *	*0.162* *
3. Social interaction	0.878	0.478	0.666	1.00	*0.371* *	*0.282* *	*0.329* *	*0.343* *
4. Meals service	0.857	0.332	0.557	0.609	1.00	*0.306* *	*0.169* *	*0.139* *
5. Staff care	0.848	0.486	0.548	0.531	0.553	1.00	*0.183* *	*0.274* *
6. Resident involvement	0.813	0.288	0.402	0.574	0.411	0.428	1.00	*0.419* *
7. WOM	0.963	0.299	0.403	0.586	0.373	0.523	0.647	1.00

4. Results

4.1. Reliability and Validity Analysis

Tables 1 and 2 show the reliabilities and the validities of the latent variables, six aspects of resident satisfaction, and WOM intention. The Cronbach alpha coefficient for each construct ranged from 0.81 to 0.96, and standardized factor loadings ranged from 0.62 to 0.98, all above the suggested acceptable values [32]. Table 2 shows the correlation estimates among the constructs and squared correlations for each construct. The AVE estimates ranged from 0.53 to 0.9, which are above 0.5 and exceed squared correlation values between the constructs. All values of the interconstruct squared correlation estimates

were less than the AVE for the corresponding constructs; therefore, the constructs met discriminant validity criteria [28]. All the constructs were statistically distinct, and all constructs captured different information, meeting the requirements for reliability and validity.

The value of the normed chi-square was 1.55, which is less than the cut-off point of 3; the CFI was 0.95, which is greater than the cut-off point of 0.9; the TLI was 0.94, which is greater than the cut-off point of 0.9; and the RMSEA was 0.06, which is less than the cut-off point of 0.8, indicating the acceptable fit of the proposed constructs across the data (Table 1).

To identify the two categories of resident satisfaction—tangible and interpersonal aspects—further analyses were conducted. We averaged the three items of *room*, the four items of *home*, and the four items of *meals service* to form a composite measure of tangible resident satisfaction. Then, the three items of social interaction, the three items of staff care, and the three items of resident involvement were combined to obtain a composite measure of interpersonal resident satisfaction. The Cronbach alpha coefficients for tangible and interpersonal were 0.69 and 0.72, respectively, and standardized factor loadings ranged from 0.54 to 0.80 (Figure 1). The value of the normed chi-square was 1.37; the CFI was 0.98; the TLI was 0.9; and the RMSEA was 0.05, showing acceptable fit for the proposed constructs across the data.

4.2. Results of Hierarchical Regression Analysis and MANOVA

Prior to hierarchical regression analysis, the variance inflation factor (VIF) test was used to check multicollinearity. The VIF ranged from 1.26 to 1.94, which is less than the cut-off point of 10 [28]. Table 1 shows the six aspects of resident satisfaction, with descriptions of the measures, means, and standard deviation values. To examine the effects of tangible and interpersonal aspects of resident satisfaction on WOM intention and the mediating effect of interpersonal aspects between tangible aspects and WOM intention, hierarchical regression analysis and MANOVA were performed. In the first step, WOM intention was regressed on tangible aspects (room, home, and meals service) of resident satisfaction. Model 1 in Table 3 shows that the effects of tangible aspects accounted for 18.2% of the variance in WOM intention (R^2 = 0.182, F (3, 153) = 11.334, $p < 0.001$). Among the tangible aspects, room did not significantly impact WOM intention (β = 0.089, t = 1.080, $p = 0.282$), while home (β = 0.219, t = 2.379, $p = 0.019$) and meals service (β = 0.216, t = 2.500, $p = 0.013$) had a significant impact on WOM intention (Table 3). With the addition of interpersonal aspects (social interaction, staff care, and involvement) of resident satisfaction into Model 1, R^2 significantly increased from 0.182 to 0.408 (ΔR^2 = 0.226, F change = 19.112, $p < 0.001$). In Model 2, the order of entry for the predictors was reversed: interpersonal aspects (mediator) were entered at the first step and the tangibles were entered second. Entering the mediator at the first step showed whether variations in the mediator significantly accounted for variations in the dependent variable. Model 2 in Table 3 shows the effects of interpersonal aspects on WOM intention accounting for 40.7% of the variance in WOM intention (R^2 = 0.407, F (3, 153) = 35.028, $p < 0.001$). All interpersonal aspects significantly impacted WOM intention: social interaction (β = 0.281, t = 3.710, $p < 0.001$), staff care (β = 0.237, t = 3.277, $p < 0.001$), and resident involvement (β = 0.277, t = 3.733, $p < 0.001$) (Table 3). With the addition of tangible aspects of resident satisfaction into Model 2, R^2 did not increase significantly (ΔR^2 = 0.001, F change = 0.077, $p = 0.972$). A comparison of the two models (Table 3) shows that interpersonal aspects of resident satisfaction impacted WOM intention more than tangible aspects of resident satisfaction, supporting Hypothesis 1.

Table 3. Results of hierarchical regression analysis. (Notes: Dependent variable = WOM intention; Durbin–Watson = 1.808; Model 1 = tangible aspects (Room, Home, & Meals service) were entered in the model first, then at the second step, interpersonal aspects were entered in the model, $\Delta R^2 = 0.226$, F change = 19.112, Sig F change < 0.001; Model 2 = interpersonal aspects (Social interaction, Staff care, and Involvement) were entered in the model first, then at the second step, tangible aspects were entered in the model, $\Delta R^2 = 0.001$, F change = 0.077, Sig F change 0.972. Staff care: satisfaction with staff care; Involvement: satisfaction with resident involvement; Social interaction: satisfaction with social interaction; Home: satisfaction with home; Room: satisfaction with room; Meals service: satisfaction with meals service.)

	Step	Variables Entered	β	*t*	Sig.	R^2	F	Sig.	R^2	F Change	Sig. F Change
Model 1	1	Room	0.089	1.080	0.282	0.182	11.334	<0.001			
		Home	0.219	2.379	0.019						
		Meals service	0.216	2.500	0.013						
	2	Room	−0.022	−0.309	0.758	0.408	17.235	<0.001	0.226	19.112	<0.001
		Home	0.023	0.269	0.788						
		Meals service	0.019	0.237	0.813						
		Social interaction	0.270	3.085	0.002						
		Staff care	0.233	3.016	0.003						
		Involvement	0.276	3.674	< 0.001						
Model 2	1	Social interaction	0.281	3.710	< 0.001	0.407	35.028	<0.001			
		Staff care	0.237	3.277	0.001						
		Involvement	0.277	3.733	< 0.001						
	2	Social interaction	0.270	3.085	0.002	0.408	17.235	<0.001	0.001	0.077	0.972
		Staff care	0.233	3.016	0.003						
		Involvement	0.276	3.674	< 0.001						
		Room	−0.022	−0.309	0.758						
		Home	0.023	0.269	0.788						
		Meals service	0.019	0.237	0.813						

For the MANOVA, tangible aspects (room, home, and meals service) were entered as independent variables, and interpersonal aspects (social interaction, staff care, and resident involvement) were entered as dependent variables. The multivariate test for homogeneity of dispersion matrices, Box's Test, was not significant (F (6, 359) = 1.778, $p = 0.103$), indicating that the homogeneity hypothesis was accepted. Results from the MANOVA indicated significant relationships between the tangible and interpersonal aspects: room (λ = 0.089, F (39, 84) = 2.717, $p < 0.001$, partial $\eta^2 = 0.554$, observed power = 1.00), home (λ = 0.031, F (60, 84) = 3.095, $p < 0.001$, partial $\eta^2 = 0.686$, observed power = 1.00), and meals service (λ = 0.035, F (48, 84) = 3.650, $p < 0.001$, partial $\eta^2 = 0.673$, observed power = 1.00). Multivariate variance of the dependent variables (interpersonal aspects) was associated with room (55.4%), home (68.6%), and meals service (67.3%) (Table 4). Thus, the results from the hierarchical regression and MANOVA confirmed that the relationship between tangible aspects of resident satisfaction and WOM intention was mediated by interpersonal aspects of resident satisfaction, supporting Hypothesis 2.

Table 4. Results of MANOVA. (Notes: Dependent variables: Interpersonal aspects of resident satisfaction (Social interaction, Staff care, and Involvement).).

	λ Value	*F-Value*	Sig.	Partial η^2	Observed Power
Room	0.089	2.717	<0.001	0.554	1.00
Home	0.031	3.095	<0.001	0.686	1.00
Meals service	0.035	3.650	<0.001	0.673	1.00

More specifically, results from the tests of between-subjects effects in MANOVA demonstrated significant relationships between room and social interaction ($F = 4.120$, $p = 0.001$, partial $\eta^2 = 0.641$, observed power = 0.995), home and social interaction ($F = 3.562$, $p = 0.001$, partial $\eta^2 = 0.704$, observed power = 0.996), home and staff care ($F = 4.014$, $p < 0.001$, partial $\eta^2 = 0.728$, observed power = 0.999), meals service and social interaction ($F = 3.595$, $p = 0.001$, partial $\eta^2 = 0.657$,

observed power = 0.993), and meals service and staff care ($F = 5.316$, $p < 0.001$, partial $\eta^2 = 0.739$, observed power = 1.00) (Table 5).

Table 5. Tests of between-subjects effects.

	Dependent Variable	*F-Value*	Sig.	Partial η^2	Observed Power
Room	Social interaction	1.606	0.139	0.410	0.708
	Staff care	4.120	0.001	0.641	0.995
	Involvement	0.754	0.698	0.246	0.341
Home	Social interaction	3.562	0.001	0.704	0.996
	Staff care	4.014	<0.001	0.728	0.999
	Involvement	1.417	0.189	0.486	0.730
Meals service	Social interaction	3.595	0.001	0.657	0.993
	Staff care	5.316	<0.001	0.739	1.00
	Involvement	0.705	0.767	0.273	0.343

One of tangible aspects of resident satisfaction, room, had a negative regression coefficient in Model 3, while it positively correlated with WOM intention in the correlation matrix. This pattern indicates the presence of a suppressor variable [33]. Within the context of this study, the results show that room was the weakest predictor of WOM intention and did not significantly impact WOM intention in either Model 1 ($\beta = 0.089$, $p = 0.282$) or Model 3 ($\beta = -0.022$, $p = 0.758$). Specifically, the results of this study indicated that the interpersonal aspects of resident satisfaction (social interaction, staff care, and resident involvement) strongly and significantly impacted WOM intention more than the tangible aspects of resident satisfaction.

5. Conclusions

This study examined the combined effects of permanent residents' satisfaction in a CCRC on their loyalty toward third places embedded within their living community. The six dimensions of resident satisfaction measures were grouped into two categories—tangible and interpersonal—to examine the importance of interpersonal aspects on WOM intention and the mediating effect of interpersonal aspects between tangible aspects of resident satisfaction and WOM intention (Figure 2). The results revealed that interpersonal aspects of resident satisfaction positively impacted WOM intention more strongly than tangible aspects. Further, the relationship between tangible aspects of resident satisfaction and WOM intention was mediated by interpersonal aspects of resident satisfaction. Thus, the two proposed hypotheses were supported.

These results underline the importance of human interaction and social engagement in third places nested within a CCRC, which is consistent with the suggestions in previous studies [6,8,18]. CCRC residents, in particular, find themselves in a unique situation. For instance, the CCRC is surrounded by embedded third places, so residents' experiences are influenced by the service environments linked together with other residents and care givers [8]. CCRC residents are long-term permanent residents with long duration service experience. They might be vulnerable physically, emotionally, and socially and may experience health change and social isolation. It can be inferred that, in the case of a CCRC, human interaction and social engagement attributes contribute to transforming a CCRC from a facility/house to a community/home. Though these attributes are important in all industries, they are likely to be more salient when a consumer faces physical or emotional vulnerability as in a CCRC. Further, over the long duration of residential service experience, the impact of tangible aspects on resident satisfaction is expected to decay over time through the process of habituation [8,26], thereby strengthening the impact of interpersonal aspects on WOM intention. Thus, CCRCs would do well to focus on interpersonal aspects instead of continuously investing in the tangible aspects of maintaining a decorative physical environment to attract regulars [6]. Focusing on the interpersonal rather than tangible aspects of resident satisfaction brings in multiple benefits to the management and also to the residents. For the management, it would enable them to achieve a high level of resident

satisfaction in a more resource-sustainable manner as well as maintaining an effective channel of future resident recruitment. For the residents, community with enhanced human interaction and social engagement would provide a healthy living environment for sustainable aging.

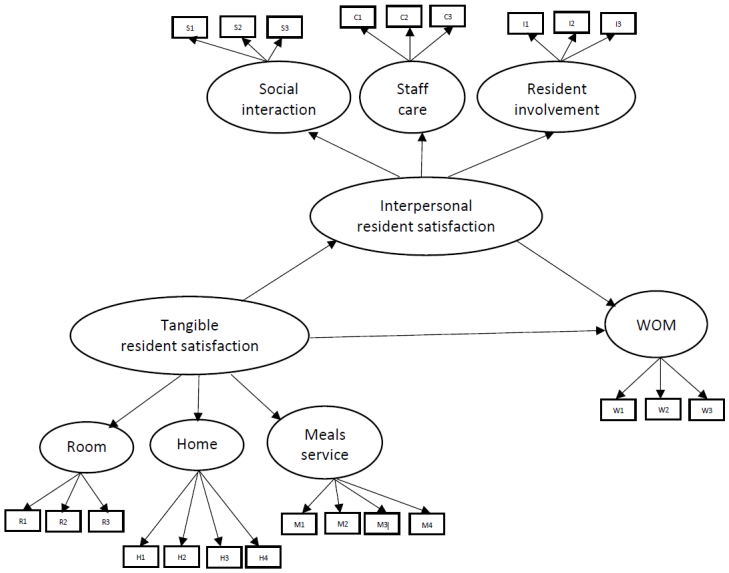


Figure 2. Proposed model–mediating effect of interpersonal aspects of resident satisfaction between tangible aspects of resident satisfaction and WOM intention in a CCRC.

From the results of the MANOVA test, home (community's design, lounge, dining room, outside areas) and meals services (variety, amount, temperature of food and meal times) positively influenced interpersonal aspects of resident satisfaction. Thus, CCRC managements should leverage these aspects to increase the social engagement and interaction in the community.

In line with the relational third place theory, the findings of this study indicate that residents in the CCRC may seek to compensate for their loss of social and emotional support through interpersonal components of their lives in the CCRCs. Thus, a high level of satisfaction with resident involvement, social interaction, and staff care in the CCRC would lead to strong formation of loyalty outcomes, i.e., strong positive WOM intention. While physical facilities and meals service are prerequisites to good care in a CCRC, the interpersonal and social support resources are vital for the satisfaction of long-term residents in a CCRC.

5.1. Theoretical and Managerial Implications

This study extends the relational third place theory by responding to the call for research in non-traditional third places raised by Rosenbaum [6]. It explores the role of third places embedded within a residential community rather than individual commercial settings. Further, this study addresses the call for research on long-duration service experiences and the effect of one location nested within another [8,10].

The results of this study indicated that interpersonal aspects of resident satisfaction positively impact WOM intention more strongly than tangible aspects of resident satisfaction. These results are supported by previous studies on the habituation effects of tangibles [6,8]. In addition, this study found that the relationship between tangible aspects of resident satisfaction and WOM intention was mediated by interpersonal aspects of resident satisfaction, highlighting the importance of human interaction and social engagement in a CCRC. This result contributes to servicescape research by confirming that "one servicescape may mediate the other's influence on outcome variable, which may affect future marketing efforts for both servicescapes" [8].

The management at CCRCs should strive to establish a social engagement culture. This will aid in the development of social interaction, active involvement, and social and emotional supports through staff and other residents within the community. For instance, the management may create a hospitality committee that sits in the dining room during meal times to allow residents to express their needs and desires in a casual atmosphere. The committee can then forward the residents' views to the management. Increased levels of social engagement through the social networks among the residents and staff in the CCRC will positively impact residents' health, well-being, and longevity [6,25]. In addition, it will increase the level of connectedness and involvement, thereby mitigating the feelings of social isolation. In addition, the study results showed that staff care, composed of staff attitude toward residents, respect for resident privacy, and prompt response to residents' calls for help, significantly impacts WOM intention in the CCRC. These service factors and an atmosphere of attentive care should be encouraged through staff training, as they may translate into competitive advantages for communities that are able to optimize these behaviors.

Residents in CCRCs stay on a long-term basis, thereby experiencing and requiring multiple types of care over time. The influence of WOM from highly satisfied long-term residents is crucial to future residents supporting the friendly and warm atmosphere. For instance, if current residents refer their community to those with whom they would like to live together, they enable the community to be more friendly and homely. Thus, CCRCs need to provide various channels for current residents to share their experiences with others. This will also increase consumer awareness about the CCRC and impact future decision makers' purchase intentions.

5.2. Limitations and Recommendations for Future Studies

Despite its theoretical and empirical contributions, this study is not without limitations. First, it is based on self-report data from residents in a CCRC and does not control for respondents' affects, emotions, or evaluative perceptions. Thus, the potential of common method bias—a single-source inflating or distorting the parameters of interest—cannot be ruled out. Future studies should use alternate data sources. Second, most participants are from residential and apartment communities, where independent seniors live. Although residents from such communities comprise about 82% of the total residents in the CCRC studied, these results may not be generalizable to all consumer segments of a long-term care housing market. Future studies should test whether the same marketing model results hold for all segments of CCRCs, catering to varying socioeconomic backgrounds. It is quite likely that the diminished health conditions of residents in less independent departments of a CCRC may pose a barrier to data collection. Third, the six dimensions of resident satisfaction in this study may not exhaustively cover all service components provided by a CCRC. For instance, residents in AL settings and nursing homes receive different levels and types of services based on their health conditions.

Another opportunity for future studies comes from the fact that this study measured CCRC resident satisfaction at a single point in time. Considering the long-term nature of residents' life in CCRCs, longitudinal studies should be carried out to examine how the impacts of tangible and interpersonal aspects of resident satisfaction on loyalty outcomes evolve over the long term as the CCRC residents transit through varying degrees of independence in their resident community.

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