

# Principali metodi in Psicologia ambientale

Table 01.1 Summary of Main Research Methods in Environmental Psychology

Setting	Method	Strengths	Weaknesses	Use
<b>Environment independent setting</b>	Questionnaire studies	High external validity Cost-effective method for reaching large populations	No manipulation of variables No causal inferences	<b>Describing populations or practices</b> <b>Studying relationships among variables</b>
<b>Artificial setting</b>	Laboratory experiments	High internal validity Control of variables	Low external validity Artificiality	<b>Testing theories or hypotheses</b> <b>Identifying causal relationships</b>
	Simulation studies	Good balance between external/internal validity Realistic visualisation	Requires advanced skills and equipment Often perceived as 'fictitious'	<b>Study complex human-environment dynamics</b> <b>Visualise and evaluate future developments</b>
<b>Real setting</b>	Case studies	High external validity Rich data	Low internal validity Time demanding Limited generalisability	<b>Descriptions</b> <b>Explorations</b> <b>Developing hypotheses</b>
	<b>Field studies</b>	<b>Good balance between external/internal validity</b> <b>Replicable</b>	<b>Limited experimental control</b> <b>Difficult data collection</b>	<b>Studying current practice</b> <b>Evaluating interventions</b>

# ESPERIMENTI

- tenute sotto controllo le possibili fonti di inquinamento dei dati
- soggetti assegnati a caso alle condizioni sperimentali
- tempi e modalità della variabile indipendente (VI) determinati dallo sperimentatore
- misurazione rigorosa della variabile dipendente (VD)
- permettono di stabilire rapporti di causa-effetto tra la VI e la VD → previsione dei comportamenti.

▪ luogo ottimale: laboratorio

vantaggi: massimo del controllo

svantaggi: ambiente isolato e artificiale

# QUASI-ESPERIMENTI

- tenute sotto controllo le possibili fonti di inquinamento dei dati
- soggetti **NON** assegnati a caso alle condizioni sperimentali
- tempi e modalità della variabile indipendente (VI) **NON** determinati dallo sperimentatore
- misurazione rigorosa della variabile dipendente (VD)
- **NON** permettono di stabilire rapporti di causa-effetto tra la VI e la VD

# STUDI CORRELAZIONALI

- si rinuncia a molti *constraints*
- è possibile una misurazione rigorosa delle variabili
- Permettono di:

acquisire informazioni su comportamenti non riproducibile in condizioni controllate

stabilire che due eventi compaiono insieme con una certa frequenza

- **NON** permettono di stabilire rapporti di causa-effetto tra la VI e la VD

Importante: uno stesso fenomeno può essere studiato con metodi diversi per identificare una convergenza di risultati

Es.: ricerca su stress ambientale svolta per mezzo di

- a) ricerca d'archivio
- b) quasi-esperimento,
- c) esperimento.

## Metodi di raccolta dati utilizzati in psicologia ambientale:

- osservazione del comportamento nell'ambiente (es. mappe comportamentali)
- self-report (questionari, interviste, focus-group)
- ricerca d'archivio
- analisi tracce ambientali

## *Questionari, interviste, resoconti verbali dei soggetti (self-report)*

- descrizione o memoria o valutazione di un ambiente
- grado di soddisfazione ambientale del soggetto
- autovalutazione del suo benessere fisico e psicologico in relazione a un determinato cambiamento ambientale

## Esempio di questionario: PEQIs (*Perceived Environmental Quality Index*)

Scopo: fornire un profilo degli atteggiamenti e delle opinioni delle persone implicate in grossi cambiamenti ambientali (cambiamenti nel livello di soddisfazione, eventuali differenze tra gruppi di età e sesso diversi, occupati o non occupati, di diversa istruzione e livello socioeconomico, e così via (Craik e Feimer, 1987))

# INDICATORI DI QUALITÀ URBANA RESIDENZIALE PERCEPITA (IQURP)

(Fornara, Bonaiuto e Bonnes, 2010)

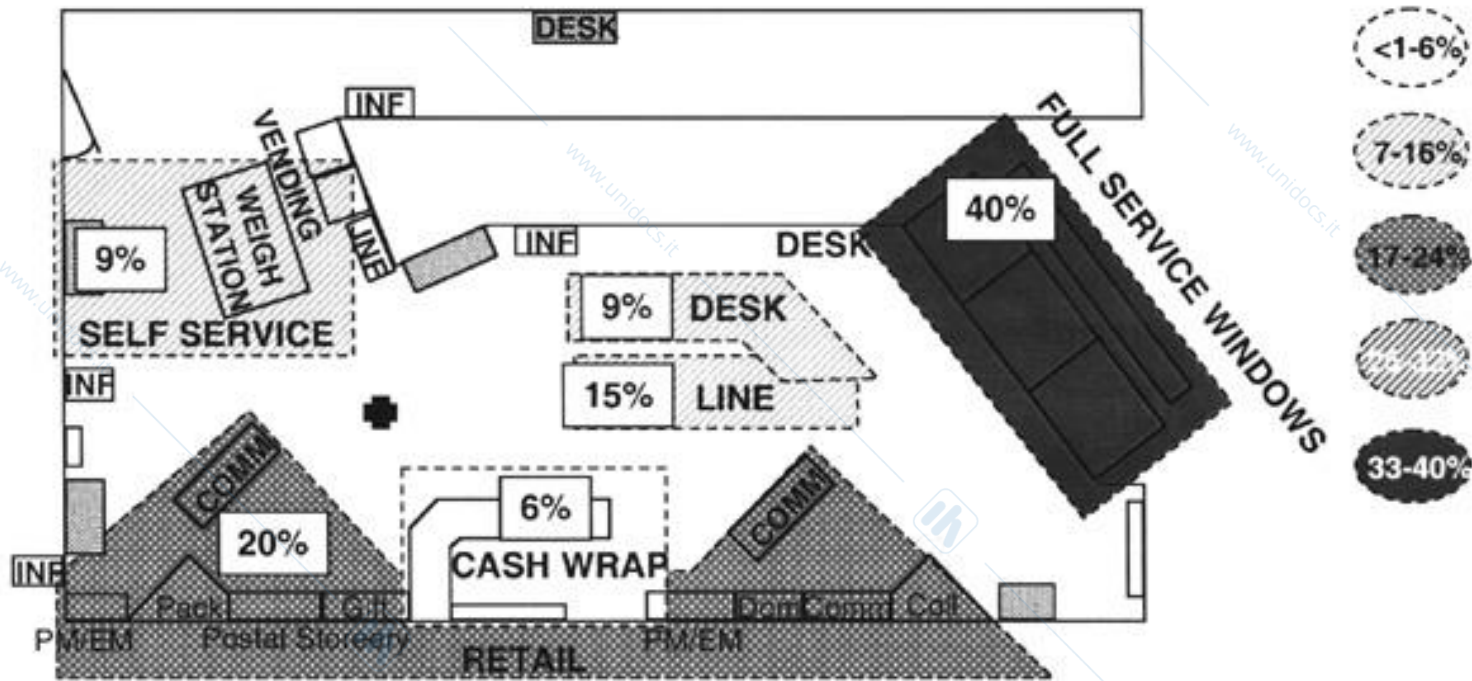
CRITERI GENERATIVI	SCALE	FATTORI	Numero Item	Codice DataSet
Aspetti architettonico urbanistici	Spazio Visualizzato	Densità degli edifici	3	DE
		Estetica degli edifici	3	EE
		Volumetria degli edifici	3	VE
	Spazio Praticato	Praticabilità degli spazi interni	3	PI
		Collegamenti con il resto della città	3	Co
	Spazio Verde	Spazio verde	4	Ve
Aspetti Sociali	Relazioni Sociali	Sicurezza	3	Si
		Discrezione	3	Di
		Socievolezza	3	So
Aspetti Funzionali	Servizi Sociali	Servizi Scolastici	3	Sc
		Servizi Socio-sanitari	3	SS
	Servizi Ricreativi	Servizi e Impianti Sportivi	3	IS
		Attività Socio-culturali	3	AS
	Servizi Commerciali	Servizi Commerciali	4	SC
	Servizi di Trasporto	Servizi di Trasporto	4	ST
	Aspetti di contesto	Clima Psicologico	Tranquillità vs. Caos	3
Stimolazione vs. Monotonia			3	SM
Salubrità Ambientale		Salubrità Ambientale	4	SA
Manutenzione e Cura		Manutenzione e Cura	4	MC
Attaccamento Residenziale	Attaccamento al Quartiere	Attaccamento al Quartiere	4	AQ
Num. Item totali			66	

Tra i metodi osservativi:

**mappe comportamentali** (Ittelson, Rivlin e Proshansky, 1976)

metodo usato per osservare il comportamento ambientale di soggetti ospedalizzati, e l'influenza di cambiamenti nell'organizzazione degli spazi per

- seguire l'evoluzione del comportamento del singolo soggetto,
- valutare quanto tempo passa da solo, quanto con gli altri, in quali momenti ha bisogno di maggiore privacy,
- verificare quale attività caratterizza i locali in cui il soggetto passa più tempo.



Observers noted customer locations at a moment in time on an hourly basis at a U.S. Post Office. The above figure shows the results accumulated over time. The map reveals the areas and services most heavily and least heavily used. It can be used to improve service and circulation. (1)

### Project for Public Spaces

This interdisciplinary team of social scientists and urban planners uses a combination of human observers and time-lapse photography to measure the use of parks, plazas, and other public spaces. The data provide an objective record of how the spaces are actually being used, regardless of how they were planned. The findings have been used to improve the design of public spaces throughout the world. For more info, see <http://www.pps.org/>

## POEs, cioè *post-occupancy evaluations* (Marcus, 1990)

La **valutazione post abitativa** (POE, *Post occupancy evaluation*) è stata creata negli Stati Uniti ed è in uso dal 1960. Essa può essere definita come “un processo sistematico di valutazione delle prestazioni degli edifici dopo che sono stati costruiti e occupati per un periodo di tempo»

- condizioni poco controllate (materiale reale, misurazioni nelle situazioni in cui i cambiamenti hanno già avuto luogo);
- problemi di campionamento → al massimo un quasi-esperimento

# Architect & Design Sustainable Design Leaders **Post Occupancy Evaluation Survey Report**

May 13, 2015

## **Prepared by:**

Julie Hiromoto, AIA, LEED AP BD+C  
Skidmore, Owings & Merrill LLP  
14 Wall Street  
New York, NY 10005

## **ABSTRACT**

Interest in Post Occupancy Evaluation (POE) is growing. Due to the various definitions of this scope of work, and the tools and knowledge required to provide these services, many are not sure where to find more information, how to evaluate if this service should be provided in their own practice, and how to get started.

This report synthesizes survey responses from 29 sustainable design leaders across the U.S. and Canada in order to document the current status of POE in the architecture profession. Over half of these firms (40 employees and larger) are currently conducting POEs and almost all would like to conduct POEs on a majority of their projects in the near future. Tools and resources to assist in the development and implementation of POEs are also included.

## Ricerca d'archivio:

consiste nel recuperare e analizzare dati che sono già stati raccolti da qualcun altro, e che sono reperibili in biblioteca o negli archivi di qualche istituzione.

## Esempi:

- ricerca per accertare se ci sono quartieri della città in cui avvengono più scippi e aggressioni.

# Esperimento in laboratorio



## Architectural design and the brain: Effects of ceiling height and perceived enclosure on beauty judgments and approach-avoidance decisions

Oshin Vartanian <sup>a,\*</sup>, Gorka Navarrete <sup>b</sup>, Anjan Chatterjee <sup>c</sup>, Lars Brorson Fich <sup>d</sup>, Jose Luis Gonzalez-Mora <sup>e</sup>, Helmut Leder <sup>f</sup>, Cristián Modroño <sup>e</sup>, Marcos Nadal <sup>f</sup>, Nicolai Rostrup <sup>g</sup>, Martin Skov <sup>h,i</sup>



**Fig. 1.** Examples of stimuli used in the study. Notes. Within each of the four conditions we controlled for the number of curvilinear (top) and rectilinear (bottom) spaces (see Method section).

- > Giudizio estetico
- Attivazione di strutture adibite alla percezione del movimento

Open

Enclosed

- Decisione di uscire
- Attivazione della regione dell'amigdala

High ceiling

- > Giudizi estetici
- Attivazione di strutture adibite all'esplorazione spaziale

Low Ceiling

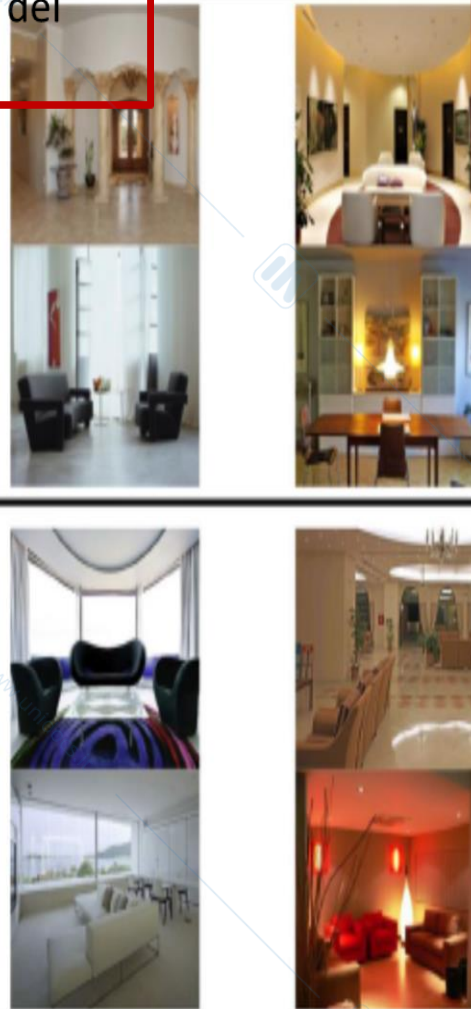


Fig. 1. Examples of stimuli used in the study. Notes. Within each of the four conditions we controlled for the number of curvilinear (top) and rectilinear (bottom) spaces (see Method section).

## Studio sul campo

Science > Vol. 224, No. 4547, Apr. 27, 1984 > View through a Window...



### View through a Window May Influence Recovery from Surgery

Roger S. Ulrich  
Science

New Series, Vol. 224, No. 4547 (Apr. 27, 1984), pp. 420-421

Published by: [American Association for the Advancement of Science](http://www.aaas.org/)

Stable URL: <http://www.jstor.org/stable/1692984>

## Pazienti con vista sugli alberi vs muro di mattoni:

- Degenza più breve
- Minor uso di analgesici
- Meno note negative riportate dalle infermiere

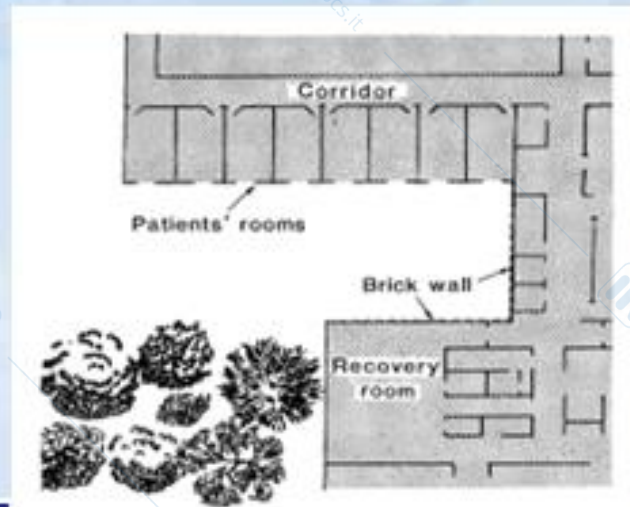






Fig. 1. Plan of the second floor of the study hospital showing the trees versus wall window views of patients. Data were also collected for patients assigned to third-floor rooms. One room on each floor was excluded because portions of both the trees and wall were visible from the windows. Architectural dimensions are not precisely to scale.

## Studio sul campo

# Interior Color and Psychological Functioning in a University Residence Hall

 **Marco Costa**<sup>1\*</sup>,  **Sergio Frumento**<sup>2</sup>,  **Mattia Nese**<sup>1</sup> and  **Iacopo Predieri**<sup>1</sup>

<sup>1</sup>Department of Psychology, University of Bologna, Bologna, Italy

<sup>2</sup>Department of Surgery, Medical, Molecular, and Critical Area Pathology, University of Pisa, Pisa, Italy

The research exploited a unique architectural setting of a university residence hall composed by six separate buildings that matched for every architectural detail and differed only for the interior color (violet, blue, green, yellow, orange, and red). Four hundred and forty-three students living in the six buildings for an average of 13.33 months participated in a study that assessed color preference (hue and lightness), lightness preference, and the effects of color on studying and mood. The results showed a preference for blue interiors, followed by green, violet, orange, yellow, and red. A preference bias was found for the specific color in which the student lived. Gender differences emerged for the preference of blue and violet. Room-lightness was significantly affected by the interior color. Room ceiling was preferred white. Blue as interior color was considered to facilitate studying activity. The use of differentiated colors in the six buildings was evaluated to significantly facilitate orienting and wayfinding. A significant relation was found between a calm mood and preference for blue.

### ORIGINAL RESEARCH ARTICLE

Front. Psychol., 28 August 2018 | <https://doi.org/10.3389/fpsyg.2018.01580>

# Studio sul campo

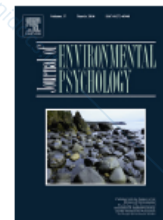
Journal of Environmental Psychology 37 (2014) 73–79



Contents lists available at ScienceDirect

## Journal of Environmental Psychology

journal homepage: [www.elsevier.com/locate/jep](http://www.elsevier.com/locate/jep)



### What working memory subcomponents are needed in the acquisition of survey knowledge? Evidence from direction estimation and shortcut tasks



Enia Labate<sup>a,\*</sup>, Francesca Pazzaglia<sup>a</sup>, Mary Hegarty<sup>b</sup>

<sup>a</sup> Department of General Psychology, University of Padua, Italy

<sup>b</sup> Department of Psychological & Brain Sciences, University of California, Santa Barbara, CA, USA

#### ARTICLE INFO

##### Article history:

Available online 1 December 2013

##### Keywords:

Survey knowledge  
Working memory  
Dual task paradigm  
Navigation

#### ABSTRACT

This study investigated whether and to what extent verbal and spatial working memory (WM) are implicated in the acquisition of survey knowledge through navigation in a real environment. We adopted a dual-task paradigm, asking participants to learn the layout of two floors of an unfamiliar building by navigation, and to perform either a verbal or a spatial concurrent task. Ninety undergraduates were assigned to one of three groups according to concurrent task condition: articulatory suppression, spatial tapping, or control (no concurrent task). Acquisition of a survey representation was tested by asking participants to perform direction estimations and shortcut tasks. The results showed that the spatial secondary task interfered most strongly with encoding survey knowledge.

© 2013 Elsevier Ltd. All rights reserved.

## PROTOCOL

## Wayfinding in ageing and Alzheimer's disease within a virtual senior residence: study protocol

Rebecca Davis &amp; Jennifer Ohman

Accepted for publication 20 January 2016

Correspondence to R. Davis:  
e-mail: [davirebe@gvsu.edu](mailto:davirebe@gvsu.edu)

Rebecca Davis PhD RN  
Professor  
Kirkhof College of Nursing, Grand Valley  
State University, Grand Rapids, Michigan,  
USA

Jennifer Ohman BSN RN  
DNP Student  
Kirkhof College of Nursing, Grand Valley  
State University, Grand Rapids, Michigan,  
USA

DAVIS R. & OHMAN J. (2016) Wayfinding in ageing and Alzheimer's disease within a virtual senior residence: study protocol. *Journal of Advanced Nursing* 72 (7), 1677–1688. doi: 10.1111/jan.12945

**Abstract**

**Aim.** To report a study protocol that examines the impact of adding salient cues in a virtual reality simulation of a senior residential building on wayfinding for older adults with and without Alzheimer's disease.

**Background.** An early symptom of Alzheimer's disease is the inability to find one's way (wayfinding). Senior residential environments are especially difficult for wayfinding. Salient cues may be able to help persons with Alzheimer's disease find their way more effectively so they can maintain independence.

**Design.** A repeated measures, within and between subjects design.

**Methods.** This study was funded by the National Institutes of Health (August 2012). Older adults ( $N = 40$ ) with normal cognition and older adults with early stage Alzheimer's disease/mild cognitive impairment ( $N = 40$ ) will try to find their way to a location repeatedly in a virtual reality simulation of senior residence. There are two environments: standard (no cues) and salient (multiple cues). Outcome measures include how often and how quickly participants find the target location in each cue condition.

**Conclusion.** The results of this study have the potential to provide evidence for ways to make the environment more supportive for wayfinding for older adults with Alzheimer's disease. This study is registered at [Trialmatch.alz.org](http://Trialmatch.alz.org) (Identifier 260425-5).

**Keywords:** ageing, Alzheimer's disease, environment, eye tracking, mild cognitive impairment, nursing, repeated measures, repeated measures, virtual reality, wayfinding

*Child Neuropsychology*, 16: 564–576, 2010  
<http://www.psypress.com/childneuropsych>  
ISSN: 0929-7049 print / 1744-4136 online  
DOI: 10.1080/09297049.2010.485125

 Psychology Press  
Taylor & Francis Group

## VISUAL PERCEPTION AND MEMORY IMPAIRMENTS IN CHILDREN AT RISK OF NONVERBAL LEARNING DISABILITIES

Irene C. Mammarella,<sup>1</sup> and Francesca Pazzaglia<sup>2</sup>

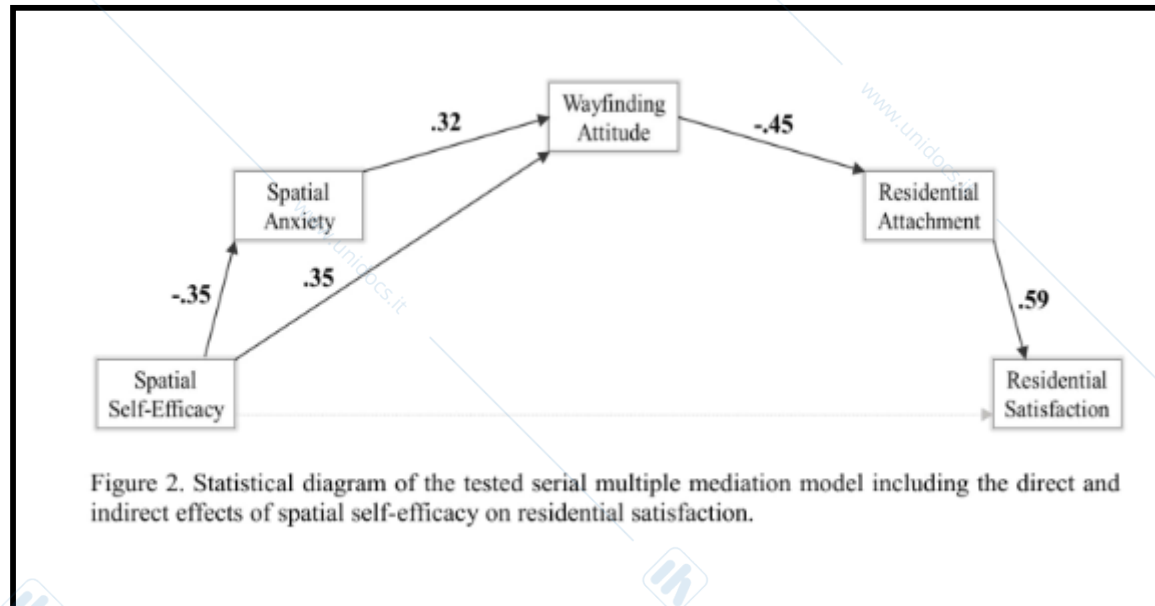
<sup>1</sup>*University of Padua, Department of Developmental and Social Psychology, Padua, Italy, and* <sup>2</sup>*University of Padua, Department of General Psychology, Padua, Italy*

*Visuospatial working memory (VSWM) and visual perception were examined in two groups aged 11–13, one with children displaying symptoms of nonverbal learning disability (NLD) (n = 18) and the other a control group without learning disabilities (n = 18). The two groups were matched for general verbal abilities, age, gender, and socioeconomic level. The children were presented with VSWM tests involving visual and spatial-simultaneous processes, and also with a classical visual illusion, a classical ambiguous figure, as well as visual perception tests specifically devised for the present study. Results revealed that performance of children at risk of NLD was worse than controls in some VSWM and in visual perception tests without memory involvement; these latter required comparisons of visual stimuli and locations in space with distractors. Moreover, the two groups differed in perceiving the classical ambiguous figure. Findings are discussed in the light of both theoretical and clinical implications.*

**Keywords:** *Nonverbal learning disability; Visual perception; Working memory; Visuospatial working memory; Learning disabilities.*

# Residential Place Attachment as an Adaptive Strategy of Coping with the Reduction of Spatial Abilities in the Old Age

Ferdinando Fornara<sup>a, e</sup>, Amanda Elizabeth Lai<sup>b</sup>,  
Marino Bonaiuto<sup>c, e</sup>, Francesca Pazzaglia<sup>d, e</sup>





ELSEVIER

Landscape and Urban Planning 65 (2003) 41–52

LANDSCAPE  
AND  
URBAN PLANNING

This article is also available online at:  
[www.elsevier.com/locate/landurbplan](http://www.elsevier.com/locate/landurbplan)

## Indexes of perceived residential environment quality and neighbourhood attachment in urban environments: a confirmation study on the city of Rome

Marino Bonaiuto\*, Ferdinando Fornara, Mirilia Bonnes

*Dipartimento di Psicologia dei Processi di Sviluppo e Socializzazione, Università degli Studi di Roma "La Sapienza",  
Via dei Marsi 78, 00185 Rome, Italy*

### Abstract

This paper presents two instruments measuring the quality of the relationship that inhabitants have with their urban neighbourhoods. These instruments consist of 11 scales measuring the perceived environmental qualities of urban neighbourhoods and one scale measuring neighbourhood attachment.

The 11 scales are included in four generative criteria as follows: three scales concern spatial aspects (i.e. architectural-planning space, organization and accessibility of space, green space); one concerns human aspects (i.e. people and social relations); four concern functional aspects (i.e. welfare, recreational, commercial, transport services); three concern contextual aspects (i.e. pace of life, environmental health, upkeep).

The study objectives were: (a) to compare the structure and number of both indexes of perceived environmental quality and the neighbourhood attachment index with respect to the findings of a study (see [J. Environ. Psychol. 19 (1999) 331]) that used a previous version of these instruments; (b) to improve the psychometric qualities (i.e. internal consistency coefficients) of the used tools.

The instruments have the form of a self-reported questionnaire which was administered to 312 residents in seven neighbourhoods (differing in various features) of a great urban context like the city of Rome.

A series of Principal Component Analyses (PCA) was performed on the data.

Results confirm the factorial structure of the scales, which include 19 perceived quality indexes (150 items total) and one neighbourhood attachment index (eight items). The scales show an increased level of reliability with respect to earlier studies.

© 2002 Elsevier Science B.V. All rights reserved.

**Keywords:** Environmental quality; Urban neighbourhood; Neighbourhood attachment; Lay evaluation; Scale reliability

# Utilizzo di self-reports: focus-group



Article

## Exploring staff perceptions on the role of physical environment in dementia care setting

Dementia  
2016, Vol. 15(4) 743-755  
© The Author(s) 2014  
Reprints and permissions:  
sagepub.co.uk/journalsPermissions.nav  
DOI: 10.1177/1471301214536910  
dem.sagepub.com



**Sook Y Lee**

Research Center Design and Health, Sweden

**Habib Chaudhury**

Simon Fraser University, Canada

**Lillian Hung**

University of British Columbia, Canada

### Abstract

This study explored staff perceptions of the role of physical environment in dementia care facilities in affecting resident's behaviors and staff care practice. We conducted focus groups with staff (n=15) in two purposely selected care facilities in Vancouver, Canada. Focus group participants included nurses, care aides, recreation staff, administrative staff, and family. Data analysis revealed two themes: (a) a supportive physical environment contributes positively to both quality of staff care interaction and residents' quality of life and (b) an unsupportive physical environment contributes negatively to residents' quality of life and thereby makes the work of staff more challenging. The staff participants collectively viewed that *comfort*, *familiarity*, and *an organized space* were important therapeutic resources for supporting the well-being of residents. Certain behaviors of residents were influenced by poor environmental factors, including *stimulation overload*, *safety risks*, *wayfinding challenge*, and *rushed care*. This study demonstrates the complex interrelationships among the dementia care setting's physical environment, staff experiences, and residents' quality of life.

### Keywords

Physical environment, dementia care, focus group, staff perceptions, residents' quality of life