

Social Indicators Research Series 45

Robert W. Marans  
Robert J. Stimson *Editors*

# Investigating Quality of Urban Life

Theory, Methods, and Empirical Research

 Springer

# Investigating Quality of Urban Life

# Social Indicators Research Series

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## Volume 45

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Robert W. Marans • Robert J. Stimson  
Editors

# Investigating Quality of Urban Life

Theory, Methods, and Empirical Research

 Springer

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# Preface

All people and all places are concerned with quality of life (QOL). Therefore it is not surprising that the topic has attracted the attention of researchers from many disciplines since the 1960s. While the topic has been studied with regularity for nearly a half century by researchers in psychology, sociology, geography, planning, and other disciplines, the past decade has seen an acceleration of scholarly interest in QOL including a stream of studies investigating individual well-being and happiness. As most of the world's population now lives in urban areas, and with disparate populations in advanced nations being highly concentrated in large cities, it is inevitable that many QOL studies have focused on measuring and modeling aspects of life in urban areas or the quality of *urban* life (QOUL). This book addresses that focus.

In planning for this volume, we established three objectives:

- (a) First, we believed it was important to provide a detailed overview of the approaches that have emerged over the past half century in studies of QOL in general and QOUL in particular. This includes, on the one hand, approaches focusing on the objective measurement of QOL and QOUL using secondary analysis of aggregate data and, on the other hand, approaches focusing on the measurement and analysis of subjective evaluations and appraisals of QOL and QOUL. More recently, efforts have been made to integrate the objective and subjective approaches in studies of QOL and QOUL. These efforts have been enhanced with the advent and development of Geographic Information Systems (GIS) technologies. This objective is addressed in Chaps. 1–6.
- (b) Second, through our own research on QOUL including empirical studies in Detroit, Michigan (USA), and in Brisbane, Queensland (Australia), we were aware of the emergence of other research employing survey-based approaches to collecting information on aspects of both QOL and QOUL. The research was conducted in a number of urban settings, both large and small, in many parts of the world. Some of those studies used similar sets of questions to those used in the Detroit and Brisbane surveys although the modes of administering the surveys differed. Likewise, the purposes of the various studies, the particular aspects

of urban life addressed, and the level or scale of the urban environment varied from place to place. Thus, we wanted to provide a series of case studies conducted by people in our network of research colleagues that illustrated these different situations, approaches, and outcomes. This objective is addressed in Chaps. 7–14.

- (c) Third, we wanted to illustrate the application of new methodological approaches to analyzing and modeling QOL in general and QOUL in particular. Furthermore, we wanted to illustrate methodological advances that are being made to integrate the objective and subjective approaches including the increasing use of GIS tools to enhance such investigations. This objective is addressed in Chaps. 15–18.

What we cover in this book is necessarily selective and much of the research in the broader field related to QOL and QOUL has only been touched upon in the chapters that follow. For example, we have not considered the voluminous research that discusses the meaning of happiness and attempts to measure and model the concept. Such limitations are deliberate and may be considered shortcomings by others.

So what are we explicitly presenting in this edited volume?

By way of an *Introduction*, our initial chapter (An Overview of Quality of Urban Life) sets the stage for the investigation of QOUL by reviewing the various approaches that have emerged in research investigating QOL and especially QOUL since the 1960s. The chapter creates a framework for subsequent chapters that are organized into four parts.

*Part I* consists of three chapters that provide detailed reviews of three specific approaches used to investigate QOL and QOUL. These chapters offer detailed reviews of the literature and outline both the theoretical frameworks and methodological approaches that have been used in the research.

In Chap. 2 (Objective Measurement of Quality of Life using Secondary Data Analysis), we (Stimson and Marans) review approaches used in studies of objective QOL and QOUL based on the analysis of secondary aggregate data. Particular emphasis is placed on discussing the social indicators movement, on the use of territorial social indicators, and on the weighting of objective measures in QOUL studies. The chapter also refers to the proliferation in recent years of an industry that sets out to rate cities according to their QOL.

In Chap. 3 (Subjective Measurement of Quality of Life Using Primary Data Collection and the Analysis of Survey Data), Rod McCrea and John Western join us in tracing the evolution of subjective evaluations of QOL in general and the subjective assessment of aspects of QOUL. The subjective approach to QOL studies relies heavily on the use of social surveys to collect information from individuals and thus generate primary data. Much of that work was pioneered by researchers at the University of Michigan's Institute for Social Research. The chapter discusses a range of theoretical frameworks used to measure and model the subjective evaluation of QOL and to appraise aspects of QOUL, including the explicit investigation of urban domains at various levels or scales ranging from dwellings and neighborhoods to city-wide and regional levels. Many of those models are firmly embedded in theories of behavioral psychology. The chapter includes a discussion of the relationship

between the subjective appraisal of elements of the urban environment and research into residential location decision process and choice. It concludes with a reference to recently used agent-based modeling.

The evolution of integrative approaches to analyzing QOUL is discussed by McCrea, Stimson, and Marans in Chap. 4. Based on the assumptions that objective urban environments can affect people's assessments of their QOL and that people's satisfaction with urban living may occur at different scales, the chapter outlines the evolution of approaches that have sought to empirically investigate relationships between objective environmental indicators of QOUL and peoples' evaluation of their overall QOUL and their assessments of aspects of their urban environment, both physical and social. Various theories and models are discussed and the relatively meager empirical evidence concerning such relationships is appraised. The chapter also shows how GIS tools are enhancing the capability of researchers to better investigate and, especially when linked with statistical tools of analysis, to model and test hypothesized links between objective and subjective indicators of QOUL. In many ways this represents a cutting-edge of contemporary quantitative modeling approaches in the investigation of QOUL.

*Part II* of the book has two chapters in which empirical information is presented on the objective measurement of QOUL.

Taking a perspective derived from research in regional science, Chap. 5 by Gordon Mulligan and John Carruthers focuses on research that investigates relationships between urban amenities, QOL and regional development. The authors draw on empirical studies conducted mainly in the USA but also in Europe. This research focuses on investigating urban environmental and other amenities using the compensating differentials principle. It also considers the use of hedonic price models to identify the desirable/attractive and the undesirable/unattractive attributes of places that might affect overall urban amenity, and to determine what the effects might be on regional development and employment performance. In that research, natural and other amenity indexes have been constructed and mapped for places across the USA. Finally, the chapter discusses relationships between city size, technology, migration, and urban amenity in the context of QOUL.

In Chap. 6 Subhrajit Guhathakurta and Ying Cao present a case study investigating variations in objective QOUL across Phoenix, Arizona. They discuss the results of their research showing a series of objective indicators of QOUL and highlight the public policy implications of their work.

*Part III* of the book comprises eight chapters covering a series of case studies using survey methods to collect data from individuals and households on subjective evaluations of QOL and the subjective assessments of aspects of QOUL. The studies cover cities and/or regions in different situational settings in the USA, Australia, Europe, and Asia. The design of some of those QOUL studies was in part coordinated so that the survey questionnaires used had common sets of questions. Thus, there is a degree of comparability across some of the case studies. That research effort was initiated through an original collaboration between the research teams led by the editors of this volume who conducted the surveys in metro Detroit and in the



Brisbane-Southeast Queensland region. The chapters presented here detail the research design (e.g., sampling and questionnaire administration) used in each study and review key findings from their surveys. Each chapter provides a brief summary of the situational context for the study reported and the process of gathering and analyzing data. Furthermore, some of the case studies discuss the implications of findings for policy and planning.

In Chap. 7 (The Quality of Life in Metro Detroit at the Beginning of the Millennium), Marans and Byoung-Suk Kweon present results from the Detroit Area Study (DAS2001) that focused on the quality of community life. DAS2001 was significant in that it celebrated the 50th anniversary of the University of Michigan's DAS. The study involves a mixed-mode sample survey design used in collecting information from respondents on their QOL in general and in particular on a comprehensive range of aspects of QOUL across the many and diverse administrative entities comprising the metro Detroit area. There is a discussion of how the findings have been used in a policy context.

In Chap. 8 (The Brisbane-South East Queensland Region, Australia: Subjective Assessment of Quality of Urban Life and Changes over Time), Stimson, McCrea, and Western report on changes that have occurred between 1997 and 2003 in resident perceptions of QOL and QOUL across the Brisbane-Southeast Queensland region using data from surveys conducted in those 2 years. The survey instruments shared a number of questions used in the DAS2001 study. The chapter highlights the spatial variations that exist across 10 sub-regions of SEQ in subjective assessments of QOL domains and on factors that might affect QOUL at various levels or scales.

In Chap. 9, the situational context shifts dramatically to Istanbul, Turkey, a city that straddles Europe and Asia. In conducting the survey of QOUL in Istanbul metropolitan area, Handan Türkoğlu, Fulin Bölen, Perver Korça Baran, and Fatih Terzi, borrow heavily from the survey instrument used in the DAS2001 study, with a focus on investigating the subjective assessment of aspects of community life. In addition, the study offers an objective environmental assessment of the city's residential areas. In particular, the study seeks to investigate how different types of housing might affect the assessment of QOL in general and of aspects of QOUL throughout Istanbul neighborhoods.

In Chap. 10, Derya Oktay and Ahmet Rustemli investigate subjective QOUL and neighborhood satisfaction in Famagusta in Northern Cyprus. Their survey also draws heavily on questions used in the DAS2001 survey. In the Famagusta study particular attention is directed toward looking how subjective assessments of QOUL might effect moving intentions.

In Chap. 11, the situational context moves to Dhaka, Bangladesh, where Abul Mukim Mozammel Haque Mridha and Gary Moore investigate neighborhood quality as a major component of residential satisfaction. The chapter suggests how findings can influence residential design and planning policies.

Chapter 12 returns to a European context where Alexander G. Keul and Thomas Prinz describe a QOUL study in Salzburg, Austria, relying heavily on GIS support. A two-phase research design is used by the authors. In the first phase, a

survey investigating people's subjective assessments of several QOUL domains is conducted as a test in one of Salzburg's neighborhoods. In the second phase, six of the city's 24 districts are studied to compare subjective QOUL assessments. The study relies heavily on using GIS to test hypotheses relating to the impact of environmental factors on subjective assessments of QOUL.

In Chap. 13, the situational context changes to a consideration of subjective QOL in Queensland, Australia. McCrea, Mark Western, and Tung-Kai Shyy explicitly focus on investigating differences between three components of the settlement pattern in Queensland, Australia, namely, comparing the metropolitan area, regional cities/towns, and rural areas. The focus is on investigating these differences with respect to four specific attributes of the physical and social urban as well as overall QOL. A series of specific hypotheses are tested.

In Chap. 14, another case study covering the State of Washington in the USA is presented where subjective QOL between urban and rural residents is compared. Benjamin Messer and Don Dillman draw on two statewide studies conducted 37 years apart and focus on subjective community satisfaction across a range of 14 QOL issues/indicators and how those have changed over time. The study makes extensive use of statistical modeling to identify predictors of community satisfaction.

*Part IV* of the book comprises four chapters in which we provide examples of methodological innovations in analyzing and modeling QOUL. These are by no means exhaustive of the innovations that are occurring in QOL/QOUL research in recent years, but they do serve to illustrate the sort of new methodological approaches that are taking place.

In Chap. 16 (Disaggregating the Measurement of Quality of Urban Life Dimensions Across a Complex Metro Region: the Case of Metro Detroit), Byoung-Suk Kweon and Marans propose a new approach for considering geographic scale in QOL research using the data collected in the DAS2001 survey. The concern is to report findings from the analysis of subjective QOUL survey data at different geographic scales to reflect the different types of settlements or places that make up a region, in this case the Detroit metro area.

In Chap. 17 (A Spatial Clustering Approach Analyzing Types of Objective Quality of Urban Life Using Spatial Data for Survey Respondents: South-East Queensland, Australia), McCrea uses the 2003SEQQOL data set to illustrate how an integrated approach using spatial objective data for residents who responded to the survey can be employed to develop a statistical model to analyze types of objective QOUL. The focus is on using spatial clustering of objective indicators to identify different "types" of subjective QOUL relating to the residential locations (neighborhoods) of the survey respondents. The approach uses a number of GIS tools to integrate the survey data with spatial objective information available from a number of sources. Cluster analysis is used to do that and typologies (in this case four "groups") of objective QOUL are derived.

In Chap. 18, Prem Chhetri joins Robert Stimson and John Western in demonstrating how GIS tools may be employed to derive region-wide patterns of QOUL dimensions across a city. The chapter reports on two applications and uses data from

the 2003SEQQOL survey. In the first an “ordered weighted average” nonlinear aggregation technique is used to derive generalized patterns of the subjective assessment of QOUL dimensions across sub-regions of the SEQ region. The second identifies and maps generalized spatial patterns of the underlying dimensions (using Principal Components Analysis) of the subjective assessment of “neighborhood attractiveness attributes” that may have affected the choices made by survey respondents in deciding where to live. Those patterns are simulated and mapped using the “neighborhood operation” function in GIS.

The future of QOUL research is discussed in the final chapter (Chap. 19) by the editors. The authors give a recap the book’s content and based on their experiences in editing it outline a number of challenges that need to be addressed in future QOUL research

We hope that researchers and students interested in QOL and especially in QOUL will find this volume instructive and that some readers may be inspired to conduct new empirical studies in new situational contexts to help advance this important area of interdisciplinary research linking the social sciences and the environmental design and planning professions. We also hope the book may attract attention among politicians and bureaucrats as the outcomes of well-designed QOL/QOUL research can be used to inform policy and planning in the quest for an improved quality of life in urban areas.

Robert W. Marans and Robert J. Stimson

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# Chapter 1

## An Overview of Quality of Urban Life

Robert W. Marans and Robert Stimson

### Introduction

This book is about quality of life (QOL), particularly as it relates to *place*. By place, we mean the geography or environments of individuals and groups of individuals such as households, neighborhoods and communities. Since most people live in urban environments, and especially in large *urban* environments that we call cities or metropolitan areas, the focus of the book is on the investigation of quality of *urban* life.

In their extensive review of the literature on QOL, Mulligan et al. (2004) broadly interpret QOL as the satisfaction that a person receives from surrounding human and physical conditions, conditions that are scale-dependent and can affect the behavior of individual people, groups such as households and economic units such as firms. For reasons outlined on the following pages, we believe their definition more accurately reflects quality of urban life (hereafter referred to as QOUL) rather than QOL. Accordingly, the book considers the meaning of QOUL as well as how it is measured and assessed.

The measurement and the assessment of QOL, and the investigation of its effects on human behavior are increasingly important topics within the social sciences

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(Dissart and Deller 2000; Diener and Suh (2000); Diener and Biswas-Diener 2008). And as discussed by Lambiri et al. (Lambiri 2007), QOL has increasingly become a concept researched theoretical and empirical in economics.

Investigating QOUL is important not only because it affects how people behave but also their life satisfaction and happiness. And it has broader implications for research and urban policy. For example, QOL in general and QOUL in particular can:

- Underlie the demand for public action (Dahmann 1985; Lu 1999)
- Directly affect the liveability of cities for residents and provide a set of metrics which allow policy makers and planners to assess the effectiveness of their efforts (Marans 2002)
- Motivate residential location decisions and choices (Campbell et al. 1976b; Golledge and Stimson 1987; Zehner 1977)
- Have broad implications for patterns of regional migration, regional economic growth, and environmental sustainability (Kemp et al. 1997)

Indeed it is well established that, at least in part, migration patterns and urban growth arise in response to differences in QOL between places (Keeble 1990; Ley 1996; Glaeser et al. 2000; Liaw et al. 2002), which may reflect the nature of employment opportunities (Brotchie et al. 1985; Grayson and Young 1994; Rogerson 1999), and the competitiveness of a city or metropolitan area (Sirgy et al. 2000). Patterns of intra-urban mobility are also related to differences in both the objective characteristics of neighborhoods and the subjective evaluations people make about aspects of the QOUL, and how that may vary across urban space (Keeble 1990; Ley 1996).

It is, then, not surprising that there is widespread interest in QOL, particularly within the context of the places where people live.

In order to understand the QOL in a particular setting, such as a city, we need to measure conditions in that place using sets of *indicators*. Furthermore, we need to monitor changes in those conditions over time in order to appraise or determine if and how those conditions have changed. And if they have changed, we need to determine if they have improved or deteriorated and by how much. This effort might include evaluating the impact of various public or private interventions which sought to improve conditions.

We know that different people may have different *perceptions* and therefore make different *subjective* judgments about the things which impinge on their QOL including specific attributes of their urban environment. To adequately investigate those aspects of QOL, we need to use model frameworks and collect data to operationalize those frameworks within a particular context.

This book includes sections that provide an overview of the evolution and application of theoretical frameworks and methodologies that have been used to investigate QOL. As discussed by Andelman et al. (1998), investigation has been pursued predominately through two approaches:

- (a) The *objective* approach which is most typically confined to the analysis and reporting of *secondary data* – usually *aggregate data* at different geographic or

**Table 1.1** Examples of QOL indicators that can be used to investigate QOUL in cities and neighborhoods

Objective indicators	Subjective indicators	Behavioral indicators
Employment rates	Housing and neighborhood satisfaction	Public transit use
Educational attainment		Participation in sports
Per capita income	Desire to move	Amount of walking and bicycling
Crime statistics	Perceptions of crime	
Domestic violence	Perceptions of school quality	Visits to cultural amenities and events
Death rates	Perceptions of health care services	
Incidence of chronic diseases	Feelings about neighbors	Visits to parks
Air quality	Feelings about rubbish collection	Visits to health clinics/doctors
Residential density	Feelings about congestion and crowding	Amount of neighboring
Housing vacancy rates	Feelings about government	Participation in voluntary organizations
Amount of parkland	Satisfaction with health	Participation in local decision-making organizations
Number of public transit riders	Satisfaction with family, friends, job etc	Residential mobility
Distance to transit stop	Life satisfaction, overall happiness	
Availability of grocery/food stores	(overall well-being)	
Vehicle kilometers/miles traveled		

Source: The authors

spatial scales – that are available mainly from official governmental data collections, including the census. This is an approach that is often associated with *social indicators* research.

- (b) The *subjective* approach which is specifically designed to *collect primary data* at the *disaggregate or individual* level using *social survey* methods where the focus is on the peoples’ behaviors and *assessments, or evaluations* of aspects of QOL in general and of QOUL in particular.

We might identify a set of *objective indicators* and *subjective indicators* that may be used to evaluate QOL in a city or neighborhoods within a city such as those attributes listed in Table 1.1. As illustrated in the third column in Table 1.1, we might want to also identify explicitly *behavioral indicators* of QOL.

But it is the nature and the strength of the links between broad objective dimensions and subjective evaluations of the urban environment which has represented a challenge for researchers. The nature and strength of linkages need to be tested as understanding them may be important in informing how planning and other policy interventions might contribute to improving the QOUL.

Much of this book is devoted to a discussion of QOUL in a number of places or environments throughout the world, reporting the outcomes of recent empirical research that has used survey methods to collect primary data on aspects of QOUL. In most of the studies, a relatively common set of core questions were included to measure perceptions of QOL domains, including those dealing

explicitly with place. In many, information relating to the sociophysical environmental context of those places was also collected. Some of the case studies present the results of modeling that explores relationships between subjective and objective aspects of QOUL, including the use of geographic information systems (GIS) technology to integrate survey-based subjective information with spatial objective information.

In the remainder of this introductory chapter, we provide an overview of approaches to the investigation of QOL in general and of QOUL in particular.

## Quality of Life and Living Environments

For many years, scholars in both the social sciences and the environmental design professions have been arguing that “quality” of any entity has a *subjective* dimension that is *perceptual* as well as having an *objective reality*. Central to that assertion is the notion that the environment may be defined as having built, natural, and socio-cultural dimensions (Marans 2005: p. 315), and different environmental settings will have specific characteristics with respect to those dimensions. But the places in which people live consist of all three of those dimensions, and research findings have clearly demonstrated that all three form important components of the QOL or subjective *well-being* of people living in a specific place.

In the introduction to their comprehensive book on well-being, Kahneman et al. (1999: p. x) indicated that the *quality of life experience* is embedded in the social and cultural context of the subject and the evaluator. Those researchers also suggest that the objective characteristics of society – such as poverty, crime rates and pollution – contribute predominately to peoples’ *judgments* of their lives.

QOL is certainly a multi-faceted concept that seems to defy precise definition. Often it is difficult to differentiate between the notions of *QOL*, *well-being*, *satisfaction*, and *happiness*. Over the years, the study of QOL has attracted the attention of researchers from a wide range of academic disciplines as well as the interest of politicians, policy makers, planners and others in the environmental professionals. It is certainly an interdisciplinary field of study.

Many QOL studies have tended to examine attributes of individuals, such as their employment, age, health, and interpersonal relationships. However, people live their lives in *places* or series of places, each of which has particular environmental characteristics. Those places might be viewed at various levels or scales – from the dwelling to the local area or neighborhood, to the city, to the broader region or even to a state or a nation – and it may be argued that where people live will influence their lives and, therefore, their QOL. As such, a fundamental assumption underlying many approaches to planning is that urban environments (places) may be designed to increase the level of satisfaction with the lives of residents. Given that most people in advanced economies live in the large urban environments that we call cities or metropolitan areas and such areas are expected to grow over the next few decades,

it is important to examine the relationships between the characteristics of urban environments and the perceived QOL of the residents.

While social scientists have had a strong interest over a long period of time in investigating aspects of QOL, that intensity of interest, the approaches used and the focus of those investigations have varied. But in recent times, there does seem to have been an upsurge of interest in QOL studies and related phenomena. An indication of that is the formation of the *International Society for Quality-of-Life Studies* (ISQOLS), which holds an annual conference and which launched in 2006 the journal *Applied Research in Quality of Life*. That journal deals with QOL studies in applied areas of the social and natural sciences, and it has the goal to:

... help decision-makers apply performance measures and outcome assessment techniques based on concepts such as well-being, human satisfaction, human development, happiness, wellness and quality-of-life.

That statement is indicative of breadth of concerns which might be related to the notion of QOL, and it reinforces the “fuzziness” of its meaning.

## Approaching How to Investigate Quality of Life

As mentioned earlier, two basic approaches have been used by researchers to examine QOUL, particularly in the context of people living in cities and metropolitan areas:

- (a) The first has involved monitoring QOL/QOUL through a set of *indicators* – usually over time – derived from *aggregated spatial data* using official sources, such as the census, that are said to be related to perceived QOL (for example, level of household income, crime rates, pollution levels, housing costs, and so on).
- (b) The second has involved modeling *relationships* between *characteristics of the urban environment* and measures of peoples’ *subjective assessments* of QOL domains, including their *satisfaction* with specific phenomena and with life as a whole. This approach typically involves data collected through survey research methods and analyzed using techniques such as regression analysis or structural equation models.

Monitoring indicators over time can provide information on those aspects of QOUL that people see as improving or declining, while survey data can also provide information on individual and community level perceptions, behaviors, subjective evaluations and levels of satisfaction with various aspects of urban living. However, as pointed out by McCrea et al. (2005), while those indicators are useful, they are also limited. That is because they cannot by themselves indicate the relative importance of the different attributes of urban living and environments that contribute to the level of satisfaction of individuals with urban living.

Even if a sample of residents living in a city were asked to rank in order of importance a list of items relating to QOUL, the information thus gathered does not

necessarily allow one to estimate the proportion of the level of satisfaction explained by any one factor nor the unique contribution of any one factor. Therefore, it is important to develop models to analyze the data and to test hypotheses about those relationships using methods to establish the relative and unique importance of various aspects of urban living in contributing to the QOUL of various groups of residents. These methods could range from regression analysis to more sophisticated structural equation modeling techniques.

The complex relationships between the characteristics of urban environments at different scales and the satisfaction of the residents of a city with QOUL domains are certainly difficult to model without a theoretical framework to guide the process. In addition to the complexities just discussed, Schwirian et al. (1995) have identified an “urbanism” construct which consists of four related dimensions, namely:

- Demographic characteristics
- Economic stress
- Social stress
- Environmental stress

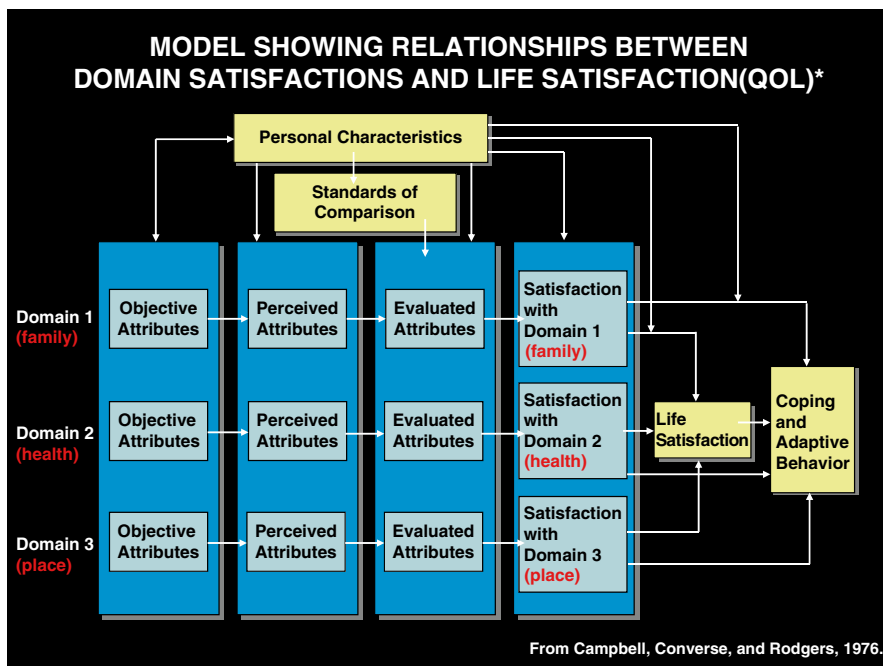
The notion is that economic, social, and environmental conditions in an urban setting might create stressful situations or experiences for some of the people living there.

It might appear that it is difficult to incorporate such a complex set of factors into one model. However, in seminal work more than 30 years ago, Marans and Rodgers (1975) proposed a model of satisfaction with residential environments and adapted in Campbell et al. (1976a). The literature in QOL studies seems to most frequently cite the Campbell et al. reference as providing an overarching model framework for the investigation of QOL which can readily incorporate a range of demographic, social, economic and environmental relationships, while taking into account satisfaction with different levels of living or domains of life (see Fig. 1.1).

The model rested on the following four principles:

- (a) The experiences of people are derived from their interactions with the surrounding environment.
- (b) The subjective experiences of people are different from the objective environment.
- (c) People respond to their experiences with the environment.
- (d) The level of satisfaction in various life domains contributes to the overall QOL experience.

In essence, the model specified a series of linkages between various objective attributes of each life domain and satisfaction measures of those domains, which in turn could be influenced by a range of individual characteristics and individual standards of comparison.



**Fig. 1.1** Model showing the relationship between domain satisfactions and life satisfaction (Source: Campbell et al. 1976a)

The approach proposed by Campbell et al. (1976a) suggested that satisfaction with life could be viewed at multiple levels of analysis (or for different life domains). As suggested by Marans and Rodgers (1975), that might include, for example:

- Satisfaction with housing
- Satisfaction with neighborhood
- Satisfaction with the wider community (or broader region).

This was thus a *bottom-up* model framework in which urban characteristics (such as perceived crime) might contribute to satisfaction in a specific domain (for example, neighborhood satisfaction) which, in turn, might contribute to overall satisfaction with life. Paths could thus be mapped from economic, social and environmental characteristics of urban living to satisfaction with different living domains, and those paths are mostly between variables at the same level of analysis. However, the Campbell et al. (1976a, b) model did provide for relationships between the various QOL domains and geographic levels of urban scale to be analyzed.



## Some Related Concepts: Well-Being, Satisfaction, and Happiness

One of the confusing things in the QOL literature is the proliferation of terms used to relate to the concept QOL. Those terms include *well-being*, *satisfaction*, and *happiness* when talking about investigating aspects of *life experiences* and QOL.

In their seminal study of the quality of American life, Campbell et al. (1976a) conceptualized the “QOL experience” as being about *individual well-being*. They measured peoples’ perceptions, evaluations and satisfaction with domains of QOL including urban domains using scales incorporated in questionnaires that were administered to a sample of more than 2,000 US residents. Primarily, the focus was on measuring the *global evaluations of life* rather than on *actual conditions* of life. In doing so, the Campbell et al. approach addressed the concept of *satisfaction* rather than *happiness*, which had been considered in earlier studies of well-being (such as those by Bradburn and Caplowitz 1965; Bradburn 1969). “Satisfaction” was viewed as being more definable and implied judgment or cognitive experience, whereas “happiness” reflected a relative short-term mood of elation or gaiety. And “satisfaction” was also considered by Campbell et al. (1976a) to be a more plausible and realistic objective for policy makers than “happiness” if research outcomes were to be used by policy makers. The intent of Campbell et al. was, then, to measure and compare peoples’ assessments of several domains of their lives as well as their “lives as a whole,” and to determine the degree to which each domain explained overall well-being or QOL. The seven domains considered were: health, marriage, housing, family, financial situation, leisure, and community or place of residence.

In addition, Campbell et al. (1976a) considered that *context* and evaluator or *person characteristics* were important in understanding QOL, with “context” being the actual conditions of life or “objective attributes.” But their attempts to measure those attributes were modest.

With respect to *domain satisfactions*, Campbell et al. (1976a, b) suggested that they were a reflection of peoples’ perceptions and assessments of the many attributes of each domain and that these in turn were influenced by the objective attributes themselves. For example, job satisfaction was seen as a function of a person’s assessment of the many attributes of a job, such as the degree of autonomy, relationships with co-workers, wages and so on. Furthermore, the assessment of the wage attribute was considered a function of the level of a person’s actual salary and his/her expectations and standards of comparison. Similarly, perceptions of crowding in a dwelling were expected to be associated with an objective measure (such as the number of people per room or another measure of housing density) and individual standards relating to crowding. That was similar to the later views of Kahneman et al. (1999) on the role of the objective world in understanding subjective well-being.

In recent years, it has again become fashionable for writers and media commentators to talk about “happiness” For example, on ABC NEWS.COM (May 29, 2008), Bob Cummins, a psychologist in Australia, said:

... When happiness was considered a mysterious, ephemeral state of mind, it was not worthy of serious consideration. But over the last few decades, science has begun to lift the veil of mystery, revealing happiness as an ordinary state of mind that can be studied and understood.

There has in fact been a proliferation of research and writings on “happiness” as seen in the recent publication of a range of books (such as those by White 2006; Thaler and Sunstein 2008; Eid 2007; van Praag 2004; Lyubomirsky 2008; and Weiner 2008; Diener and Biswas-Diener 2008). Some of that research on happiness (for example, van Praag 2004) reflect what has been perused by economists, and that type of research is considered by some to be at the frontier of that discipline using econometric analysis to deal with variables including income, health, marriage, gender, social comparison norms and the dynamics of satisfaction. However, as has already been noted, most of those factors have long been considered in research by psychologists and sociologists in the study of happiness and satisfaction, often in the context of studying well-being.

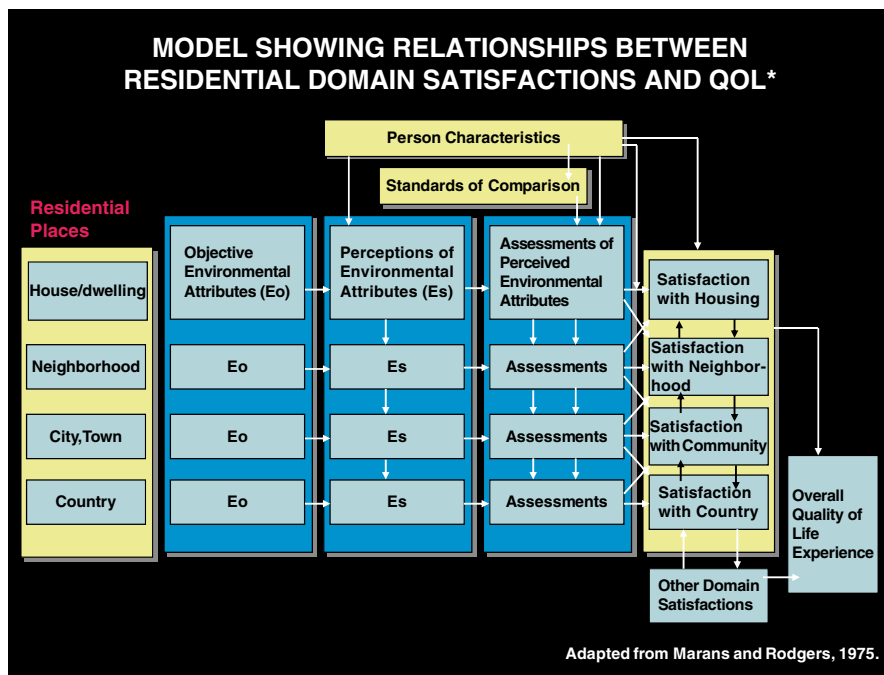
The quantitative analysis of happiness by social scientists has resulted in the development of sophisticated scales to measure individual and collective norms that include satisfaction with life as a whole as well as with various domains of life, such as health and income. And there are a number of on-going surveys that attempt to measure “happiness,” one being the *Australian Unity Wellbeing Index*, which has been measuring the happiness of Australians since April 2001 (see Cummins et al. 2003). It uses the *Subjective Wellbeing Homeostasis* management system, which suggests that we hold happiness within a relatively narrow range of values. It has been shown to be resilient. It would seem that two key factors relating to peoples’ happiness are:

- An internal factor, namely relationships (for which one may read as having an emotionally intimate relationship)
- An external factor, namely resources (for which one may read as “money”)

That Australian study suggests that happiness rises only marginally beyond a household income of about A\$100,000 a year and that after A\$150,000, there is no more rise in happiness. And having more money is not a substitute for not having a good relationship. This is the so-called Easterlin Paradox, which says that once people have met their basic needs, they do not become happier as they become richer.

## Place and Environmental Setting Do Matter

There is considerable evidence to show that “place” matters when it comes to QOL concerns, and studies focusing on QOUL enable us to better understand the meaning of QOL and how it might be measured (Marans 2002: p. 2). For example, Marans and his collaborators (Marans and Rodgers 1975; Lee and Marans 1980; Connerly and Marans 1985, 1988) have built on the seminal work by Campbell et al. (1976a) to explore the *objective–subjective relationships* in investigating QOUL, asserting that the quality of a place or the geographic setting at various levels of *scale* (the region, the city as a whole, the neighborhood, the dwelling) is in fact a subjective phenomenon and that each person occupying that setting might differ in their views about it. Further, it has been suggested that those views would reflect each individual’s



**Fig. 1.2** Model showing the relationships between residential domain satisfactions and quality of life (Source: Marans and Rodgers 1975)

*perceptions* and *assessments* of a number of setting attributes that could in turn be influenced by certain characteristics of the occupant, including their *past experiences*. Those past experiences thus represent a set of standards against which current judgments are being made. Those judgments include other settings experienced by the resident of a place, and they also include their *aspirations*. Finally, it also has been asserted that those assessments and perceptions of setting attributes are associated with the place attributes themselves. Marans (2002) provides this example:

... the degree to which a person feels crowded at home is expected to be related to some degree to the number of people in his household per room (i.e. housing unit density). At the neighborhood level, assessments of air quality and family health (e.g. the incidence of asthma) are likely to be associated with air quality measures in the neighborhood. (pp. 1–2)

Marans and Rodgers (1975) had proposed a model depicting such relationships for different residential domains of urban environments and how those domains, together with other domains, contribute to QOL (see Fig. 1.2). There are, of course, assumptions underlying the model:

- (a) One is that the *quality of the geographical or environmental setting* (the region, the city, the neighborhood or the dwelling) cannot be captured through a single

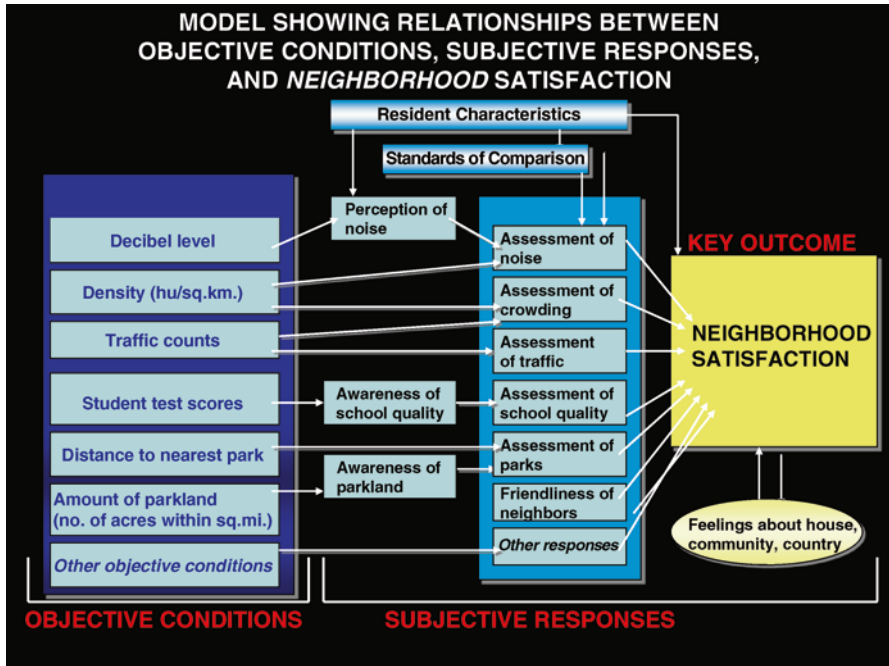


Fig. 1.3 Model showing the relationships between objective neighborhood conditions, subjective responses and neighborhood satisfaction (Source: Marans 2002)

measure; rather, it requires measures of multiple attributes of the environmental setting in question. In as yet to be specified combination, it reflects the overall quality of the setting.

- (b) Another is that quality is a *subjective phenomenon reflecting the life experiences* of the occupants of the setting. The objective conditions of the setting themselves do *not* convey the true quality of the setting; rather, its quality is a reflection of the meaning of those conditions to the occupants.

More recently, Marans (2002) has elaborated on the model by showing the relationships that might account for people’s feelings about their neighborhood (that is, “neighborhood satisfaction”), as demonstrated in the example given in Fig. 1.3.

As Marans (2002) has stated:

... Often, policy-makers want to know the most effective means of enhancing satisfaction. An important part of research therefore is determining the degree to which various objective conditions are associated with satisfaction. There is general agreement that satisfaction as an indicator of individual well-being is an important outcome in quality of life research. Nonetheless, there are other outcomes of importance to well-being that may be examined in quality of life studies. For instance, the physical health of individuals and the amount and type of physical activity they engage in are important to their overall well-being. (p. 3)

**Table 1.2** Additional possible outcomes at the neighborhood and the dwelling level

Neighborhood	Dwelling
Concern for safety	Amount of leisure time spent at home
Rating of school quality	Number of accidents
Public transit use	Amount of time spent with children
Assessment of public transit	Time spent in housekeeping
Involvement in governance at a city level	Time spent in home maintenance
Amount of neighboring	
Number of shopping trips	
Where children play	
<i>Park visits</i>	<i>Airborne-related illnesses</i>
<i>Amount of walking</i>	<i>Number of meals at home</i>
<i>Visits to doctors</i>	

Note: Items in italics might be used as physical health-related outcomes

Source: The authors

It may be that in investigating QOUL, researchers might want to explicitly focus on outcomes additional to those indicated in Fig. 1.2. By way of example, that might include the outcomes for people at the neighborhood level and at the dwelling level that are listed in Table 1.2. Particular measures might be used to relate to an outcome on a particular domain, such as the items in italics that could relate to physical health outcomes.

A further conceptual model proposed by Marans and Mohai (1991) suggests how health may be linked to a number of objective conditions associated with a set of leisure resources including environmental quality, as illustrated in Fig. 1.4. It showed that environmental and urban amenities are related to community quality and individual activities, satisfactions, and physical health:

(a) Environmental amenities include both:

- Natural recreation resources (for example, rivers, lakes, wetlands, forests)
- The quality of the ambient environment (air, water, noise, solid, and hazardous waste)

(b) Urban amenities include both:

- Man-made recreation resources (swimming pools, bicycle paths, walking trails, golf courses)
- Cultural resources (cinemas, concert halls, orchestras, museums, galleries, sports teams)

The model hypothesized that the perceptions or awareness of these environmental and urban amenities will influence peoples' evaluation and their use of them. And the model also suggested that in the case of the man-made recreational resources and the natural recreational resources, their use or non-use by an individual is associated with physical health.

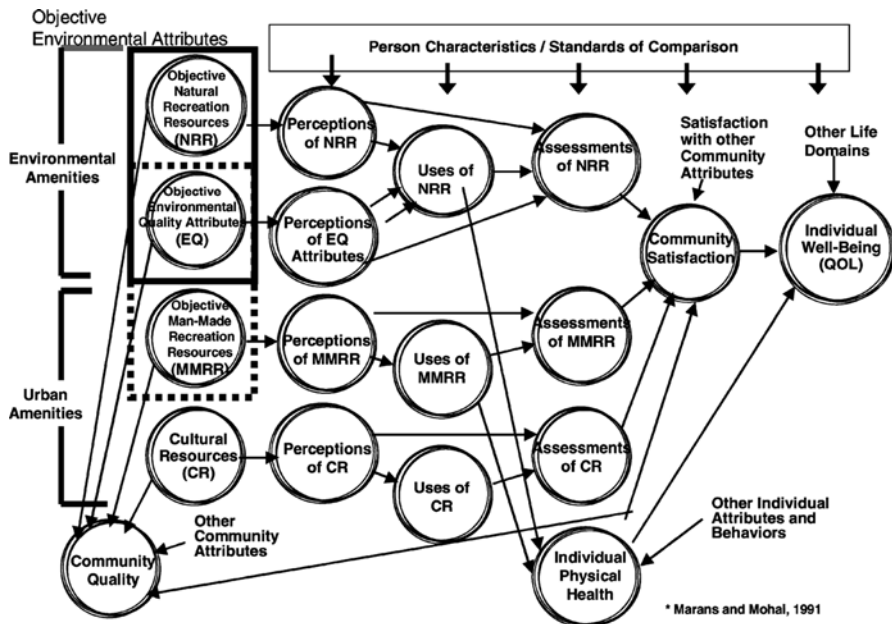


Fig. 1.4 A model linking recreation resources and activities to individual well-being, health and community quality (Source: Marans & Mohai 1991)

Models such as that depicted in Fig. 1.4 provide opportunities to explore many relationships including the role of recreational, environmental, and cultural resources in understanding QOL and in particular QOUL. Conceptualizing similar models can serve to guide data collection and analyses for other outcomes associated with QOL and with *quality of place*.

But the importance of relationships between urban characteristics and the perceived or subjective assessment of QOUL extends far beyond the satisfaction of individual residents with their living environments. Indeed, that has been the focus of much of the aggregate level analysis and modeling that had been conducted using spatial objective data. For example, as discussed at the outset to this chapter, migration patterns are often attributed in part to QOUL considerations associated with particular cities or regions that may either be places from which people move or places to which people are attracted, and there is a rich literature in geography and regional science investigating migration flows using aggregate data derived from the census. Such models typically use as explanatory variables *place-related attributes*, including measures of local labor market characteristics (such as industry structure and wages) and urban amenities, which might include, for example, climate, the amount of public open space and the number of recreational facilities, museums and art galleries, sports teams, health services and facilities, and public transport characteristics.

By way of an example, in a study for the US Department of Housing and Urban Development, Glaeser et al. (2000) made the claim that urban growth is