A place-based approach to neighbourhood sustainability assessment in low-income comunities in Brazil

Thesis Research Project – 2021-2025 Andriele da Silva Panosso

Federal University of Rio Grande do Sul, UFRGS, Brazil Graduate Program in Urban and Regional Planning, Propur Supervisor in Brazil: Dr Luciana Miron Supervisors in the UK – Dr Patricia Tzortzopoulos and Dr Ioanni Delsante Thesis Research Project evolution

- UK Visting period: March to September 2023;
- **Before visiting** University of Huddersfield: Covid-19 Pandemic: Urban quality of life in neighbourhoods of Porto Alegre, Brazil;
- Contact with researchers from South Africa and Prof Patricia's network;
- Research on Sustainability in low-income neighbourhoods in South Africa;
- Delphi Study in the UK and BR (2024);
- Comparison study between SA, UK and BR;
- New Direction on the thesis research Project;
- **Common ground**: quality of life and Sustainability, neighbourhood scale, indicators, low-income;
- **New additions**: Sustainability conceptualization, place-based approach, methodology for selecting, weighting and adjusting SI.

Research problem

Measuring sustainability is important for **evaluating urban interventions** and **policies**.

There is **no consensus** on how to assess sustainability in different sectors.

What it means to be sustainable **changes in different spatial and temporal contexts**.

Conventional assessment tools have limitations, focusing heavily on the **certification** aspect of new developments and with imbalances between sustainability dimensions.

They are **market-oriented, high-income focused** and may not promote real changes towards sustainability.

Research problem

Conventional tools adopt a **top-down approach**.

Indicators are selected by professionals, with **little participation of community stakeholders** and processes that are **not very transparent**.

It is necessary to **balance top-down and bottom-up** approaches so that assessments **reflect local realities**.

Place-based approaches and community engagement are promising and necessary ways of doing so.

Gap in knowledge

The **literature** on sustainability indicator systems is **abundant**, especially in **developed countries**.

However, there is a **lack of research and specific tools** for assessing neighbourhood sustainability in the **Brazilian context**, other **developing countries**, and existing **low-income communities**.

More comprehensive research and more balanced approaches to measuring urban sustainability, taking into account the specificities of developing countries such as Brazil, are needed.

How to *improve the process* of assessing the sustainability of neighbourhoods in low-income comunities in Brazil?

Main research question

Thesis Research Project – Andriele da Silva Panosso - Federal University of Rio Grande do Sul, UFRGS, Brazil - Graduate Program in Urban and Regional Planning, Propur

Main goal

 To develop a balanced neighbourhood sustainability assessment methodology for selecting, adjusting and weighting SI using a place-based approach.

Research overview

How to improve the process of assessing the sustainability of neighbourhoods in low-income communities in Brazil?



Research questions

Contributions to knowledge

Thesis Research Project – Andriele da Silva Panosso - Federal University of Rio Grande do Sul, UFRGS, Brazil - Graduate Program in Urban and Regional Planning, Propur

A place-based approach to neighbourhood sustainability assessment in lowincome communities in Brazil

Thank you

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Urban Quality of Life: Multidimensional Evaluation in Porto Alegre, Brazil

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URBAN QUALITY OF LIFE

A Systematic Literature Review

SYSTEMATIC LITERATURE REVIEW METHOD and RESULTS











INTRODUCTION



PORTO ALEGRE, BRAZIL



INTRODUCTION

November 2018 to May 2019 PhD Sandwich

University of Huddersfield Prof Dr Patricia Tzortzopoulos & Dr Ioanni Delsante



Architecture School – Porto Alegre, Brazil Graduate Program in Urban and Regional Planning (PROPUR) ------Federal University of Rio Grande do Sul (UFRGS)

2014 - 2022 Lecturer

Architecture School Feevale University and Uniftec (Brazil)



PhD THESIS

PhD Thesis

Urban Quality of Life: Multidimensional Evaluation in Porto

Alegre, Brazil

RESEARCH AIM



PhD THESIS | Case studies in the central area of Porto Alegre



PhD THESIS | Case studies in the central area of Porto Alegre



	SYSTEMA	TIC LITERATURE REVIEW PROTOCOL				
Research framework	Research subject	QoL in in the context of the renovation of buildings for social housing in central urban areas.				
	Research context	Problems related to the location of social housing in Brazilian cities + vacant buildings in central areas.				
	Research problem	Studies and public policies that focus on the financial and immediate costs of the renovation of buildings for social housing, but do not seek to evaluate whether it improves the QoL of the inhabitants or generates benefits to the urban centres.				
SLR framework	SLR question	How can the quality of life be assessed through urban indicators?				
	Expected findings	Better understanding of the QoL concept and the main evaluation methods used in order to understand the concepts and methods to assess QoL.				
_	Inclusion criteria	Languages: English, Portuguese, and Spanish.				
		Studies should present both search terms in either the title, abstract and keywords, and at least one of the terms must appear as a keyword.				
		Studies must have open access.				
-	Search terms	("urban indicators" OR "indicadores urbanos") AND ("quality of life" OR "well-being" OR "qualidade de vida").				
	Databases	Scopus Elsevier; Web of Science; ProQuest.				

SYSTEMATIC LITERATURE REVIEW METHOD



Criteria: should have at least one of the terms* as a key word (26)

SYSTEMATIC LITERATURE REVIEW METHOD

Quality and relevance assessment of the 26 studies

Ξ.	Studies	Main subjects	(A)	(B)	(C)	(D)
1	Abbate et al. (2001)	Urban services (QoL).	medium	high	high	medium
2	Alibegović and Villa (2008)	Environmental; Economic; Governance; Management.	high	medium	high	medium
3	Archibugi (2001)	City effect point of view (positive/negatives categories).	high	high	low	medium
4	Bagstad and Shammin (2012)	Sustainability indicators: The Economy; Environmental; Social.	low	low	low	low
5	Berhe et al. (2014)	Housing; Access to public services; and Family income (resignation/dissonance).	high	high	high	high
6	Bielinskas et al. (2018)	Economic; Social; Physical; Environmental.	high	medium	high	medium
7	Coulton and Korbin (2007)	Local indicators (child well-being). Subjective indicators.	medium	medium	medium	medium
8	Gomes et al. (2010)	QoL: objectives and subjective indicators.	high	high	high	high
9	Hernández Aja (2009)	Urban QoL: Environmental quality; Wellness; Identity.	high	medium	high	medium
10	Kaklauskas et al. (2018)	Sustainability indicators (QoL): Economic; Environmental; Social.	high	medium	low	medium
11	Labonte et al. (2001)	Subjective indicators.	low	medium	medium	low
12	Marsal-Llacuna (2017)	ISO 37120 + Subjective indicators.	medium	medium	medium	medium
13	Martínez (2009)	Inequality aspects: QoL conditions and distributions of opportunities.	high	high	high	high
14	Martinez-Baldares and Cordero- Montero (2017)	Urban indicators; Integral density centralities.	medium	low	low	low
15	McAslan et al. (2013)	Objective indicators; Subjective indicators (satisfaction surveys).	high	high	high	high
16	Mohamed et al. (2017)	Urban indicators on an agricultural road.	low	low	low	low
17	Oliveira et al. (2017)	Crime.	low	low	low	low
18	Paramo et al. (2016)	ONU: The Economy; Environmental; Social.	medium	medium	medium	medium
19	Piovano and Mesa (2017)	Access to sunlight.	low	low	low	low
20	Santos and Martins (2007)	QoL: quantitative and qualitative approach.	medium	high	high	medium
21	Sawicki and Flynn (1996)	Local indicators.	high	high	high	high
22	Sharifianpur and Faryadi (2014)	Environmental quality.	low	low	low	low
23	Siche et al. (2007)	Discussion: index and indicator.	low	low	low	low
24	Tovar and Bourdeau-Lepage (2013)	Well-being.	medium	high	medium	medium
25	Vaca Ruiz et al. (2014)	The Economy	low	low	low	low
26	Van Herzele and Wiedemann (2003)	Accessibility; Attractive (green spaces).	high	medium	medium	medium

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6	Bielinskas et al. (2018)	Economic; Social; Physical; Environmental.	high	medium	high	medium
7	Coulton and Korbin (2007)	Local indicators (child well-being). Subjective indicators.	medium	medium	medium	medium
8	Gomes et al. (2010)	QoL: objectives and subjective indicators.	high	high	high	high

Ten specific categories of analysis that contribute to the discussion on QoL:

- a. QoL concept review is presented in 19% of the studies. As QoL is a complex concept, past research discussed a variety of approaches;
- Secondary data are considered by 54% of the studies, while 31% of the studies developed empirical studies and collected primary data, specially through interviews and surveys;
- c. Objective indicators are included in most existing studies (81%). Subjective indicators are shown in 54%. Both objective and subjective indicators are considered in 42% of the papers analyzed;
- d. The regional scale unit of analysis is included in 31% of the papers, while the local scale is used by 46%;
- e. QoL indicators are proposed by 58% of the studies, while QoL index is incorporated by only 11%.

SYSTEMATIC LITERATURE REVIEW DISCUSSION

- 1. The Urban Quality of Life (QoL) Concept
- 2. Existing Models to Assess Urban Quality of Life (QoL)
- 3. Urban Quality of Life (QoL) Indicators

QoL concepts discussed in five of the twenty-six papers (19%) analyzed in the SLR.

	Studies	QoL concept	The Urban Quality of
1	Abbate et al. (2001, p.276)	"QoL refers to two interconnected concepts: the relationship between material and non-material aspects of welfare and the tie between the individual and collective life conditions".	Life (QoL) Concept
5	Berhe et al. (2014)	QoL combines both objective living conditions (existent secondary data) and the subjective perception of living conditions (people's satisfaction).	
8	Gomes et al. (2010, p.577)	QoL was assumed in this study to be "as an individual perception of the socio- territorial contexts, evaluating quantitatively or qualitatively aspects of a subjective or objective nature which, from a perspective of territorial analysis, is expected to encompass the individual or collective manifestation of preferences and behaviours revealed in the presence of the intrinsic characteristics of the place".	
9	Hernández Aja (2009)	QoL introduces environmental aspects into the intersection with human needs. Quality of urban life is the embodiment of QoL in the urban space, which can be considered as a social construction formed by three basic dimensions: environmental quality, well-being (individual satisfaction), and identity (appropriation and participation).	
11	Labonte et al. (2001)	The study makes a brief review of the urban QoL, highlighting the importance of the identification of well-being across urban space, especially by analysing social phenomena and the attractiveness of the places, aiming to give feedback to urban policies.	

1. The Urban Quality of Life (QoL) Concept

The urban quality of life is **multidimensional** and includes material, non-material, individual and collective living conditions, the **objective dimension of living conditions** (indicators based on universal metrics) and the **subjective dimension** of these living conditions (people's satisfaction).

In this sense, these dimensions have different methodologies for evaluating certain living conditions an they are considered equally relevant.



2. Existing Models to Assess Urban Quality of Life (QoL)

	Studies	QoL evaluation models
1	Abbate et al. (2001) *	Proposal of a model to evaluate the quality of services, measuring the judgement of the citizen towards of the main services (Palermo, Italy).
2	Alibegović and De Villa (2008) *	To assess the European urban environment, 55 indicators are selected for 51 European cities.
3	Archibugi (2001) *	Proposal of a model (indicators framework) to evaluate the QoL in France, Germany, UK and Italy (comparable indicators).
4	Bagstad and Shammin (2012)	Secondary data analysis (1990–2005) of the state of Ohio, USA (Sustainability indicators: Economic; Environmental; Social)
5	Berhe et al. (2014) *	A mixed method approach was developed and applied in the city of Mekelle, Ethiopia, to measure objective and subjective QoL and to understand the divergence between them (adaptation and dissonance).
6	Bielinskas et al. (2018)	Evaluation tool proposal: Analysis of 20 neighbourhoods based on the 18 criteria that influence the perception of QoL by citizens (Lithuania).
7	Coulton and Korbin (2007)	Child well-being at the level of the neighbourhood: highlighted the importance of considering both objective and subjective indicators was highlighted.
8	Gomes et al. (2010)	QoL concept definition for future application in Portugal: selection of social indicators, to understand the perception of QoL from the perspective of residents.
9	Hernández Aja (2009) *	Analysis of existing indicators in Spain and proposal for new indicators.
10	Kaklauskas et al. (2018)	Analysis of comparable data from the 2012-2016 QoL surveys in European Cities.
11	Labonte et al. (2001) *	Comparative intra-urban QoL research in Saskatoon, Canada: Social / Subjective indicators.
12	Marsal-Llacuna (2017) *	Proposal to include 10 socio-cultural indicators in ISO 37120.
13	Martínez (2009) *	Presents a framework on how to formulate indicators and proposes interesting cross-analyses, considering self-expressed needs.
14	Martinez-Baldares and Cordero-Montero (2017)	Proposal of urban indicators at regional level - No case study/implementation. Lack of accuracy and specificity.
15	McAslan et al. (2013) *	QoL assessment: Collection of objective and subjective data in 8 US-Mexico border cities + Index based on economic, social, and environmental indicators, and assessment of happiness (satisfaction) and social well-being.
16	Mohamed et al. (2017)	Proposed indicators to assess QoL - Method is not clear.
17	Oliveira et al. (2017)	Proposal of a method to assess the spatial concentration of crime (secondary data from US and UK). Lack of accuracy and specificity.
18	Paramo et al. (2016) *	Proposal of a framework that integrates quantitative and qualitative indicators to assess the quality of the public space (based on data available on the web). However, it does not contribute in an innovative way to their implementation.
19	Piovano and Mesa (2017)	Despite presenting urban indicators as a key word, this study is not about urban indicators, but rather <u>amount of sunlight</u> . Lack of transparency, accuracy, and specificity.
20	Santos and Martins (2007) *	QoL monitoring system: quantitative (statistical indicators) and qualitative (based on citizens' perception of QoL) approach.
21	Sawicki and Flynn (1996) *	Discussion on the importance of measuring neighbourhood indicators – local scale, participatory process, people's perception.
22	Sharifianpur and Faryadi (2014) *	Urban environmental quality evaluation model in the city of Isfahan.
23	Siche et al. (2007)	Discussion about the meaning of the words index and indicator + sustainability.
24	Tovar and Bourdeau-Lepage (2013) *	Proposal for a well-being indicator to identify socio-spatial differences between cities. Lack of precision.
25	Vaca Ruiz et al. (2014)	Proposed indicators to predict the economic capital of cities. Outdated economic indicators - Argues that it is cheaper to estimate from data extracted from social media (than census) – Questionable.
26	Van Herzele and Wiedemann (2003) *	Good method: mapping secondary data (maps, existing surveys), accessibility assessment (GIS-model software distances and barriers); evaluation of attractiveness (map and field observation - subjective). Negative point: no interviews/ questionnaires with users.

3. Urban Quality of Life (QoL) Indicators



The main QoL dimensions and the number of studies that
considered these dimensions

	Studies	QoL indicators
1	Abbate et al. (2001)	Urban services (QoL): Environment; Education and cultural activities; social
1	Abbate et al. (2001)	activities; public transportation.
2	Alibegović and De Villa	Environmental indicators; Economic indicators, Governance and Management
2	(2008)	indicators.
		City effect indicators: Economy; Number of firms births per capita; Social-cultu
3	Archibugi (2001)	diversity; Public service; Education; Subjective contentment/Degree of
	D (1 101	satisfaction.
4	Bagstad and Shammin (2012)	Sustainability indicators: Economic; Environmental; Social.
5		Housing: Public corrigos: A doqueto family income
5	Berhe et al. (2014)	Housing; Public services; Adequate family income
6	Bielinskas et al. (2018)	Economic; Social; Physical; Environmental.
7	Coulton and Korbin (2007)	Local indicators (child well-being). Subjective indicators.
		Housing; transportation; leisure, media and culture; social and political
8	Gomes et al. (2010)	participation; education; working conditions; income, health; environment; publ
		safety and total life situation (Noll, 2002).
9	Hernández Aja (2009)	Economic indicators; Environmental indicators; Social indicators; Urban
		indicators.
11	Labonte et al. (2001)	Cluster analysis; Subjective indicators; Social Cohesion; Satisfaction: External Structures, Personal Relationships and Neighbourhood.
		No. of NGOs dedicated to solidarity per 100,000 inhabitants; % of municipal
		budget to providing means to different beliefs, to cultural activities, and to
	Marsal-Llacuna (2017)	vulnerable groups (disabled, children, and the elderly); % surface in municipal
12		buildings to citizens to perform civic activities; existence of "citizens" inbox";
		of adult population enrolled in training and educational programs; % of populati
		suffering from malnutrition; Transparency of the municipal budget.
13	Martínez (2009)	Conditions of quality-of-life; Accessibility.
		Objective indicators of QoL: population, economy, education, health, housing,
15	McAslan et al. (2013)	public safety. Subjective indicators of QoL: personal quality of life (overall
		satisfaction).
10	Denome at al. (2016)	Environmental quality; urban mobility; public services; culture; public safety,
10	Paramo et al. (2016)	government dynamics; social dynamics; economy; infrastructure.
		Objective indicators/Quantitative assessment (data): Environmental Conditions;
20	Santos and Martins	Collective Material Conditions; Economic Conditions; Social dimension and the
20	(2007)	participation of citizens. Subjective indicators/Qualitative assessment (open
		questions).
	Sawicki and Flynn	No. of supermarkets, public housing units, employers, jobs, libraries, public
21	(1996)	elementary schools, and police precincts; distance to downtown core and mayor
		employment centres; No. of infant deaths.
22	Sharifianpur and Faryadi	Environment; Health, Safety; Education; Economy; Urban facilities;
	(2014)	Transportation; Housing; Culture, Art, Recreation.
24	Tovar and Bourdeau-	Well-being as freedom: education, social environment, urban mobility. Choice of freedom: properties of the nonulation that has the right to yota. Wall being as
∠4	Lepage (2013)	freedom: proportion of the population that has the right to vote. Well-being as realisations: income housing conditions employment
	Van Herzele and	realisations: income, housing conditions, employment. Parameters for evaluation of the attractiveness of urban green spaces: Spaces;
26	Wiedemann (2003)	Culture and history; Quietness; Facilities.
	wiedemann (2003)	Curtare and misory, Queeness, Facilities.

3. Urban Quality of Life (QoL) Indicators

Seven dimensions can be highlighted as relevant when assessing the multidimensional urban QoL:



Multidimensional urban QoL includes horizontal dimensions (objective and subjective dimensions) and vertical dimensions (themes), that is, relevant aspects of the living conditions that should be objectively and subjectively assessed.

A conceptual framework to evaluate the multidimensional urban QoL

3. Urban Quality of Life (QoL) Indicators

The seven QoL dimensions and the forty-two urban QoL indicators proposed in this study.

These can guide policymakers, decisionmakers who work on urban planning issues, researchers and students.

	QoL Dimensions	Urban QoL Indicators
		Solid waste collection
1.		Water supply
	Urban convices	Electricity supply
	Urban services	Internet services
		Health-related services (hospitals, health centres, etc.)
		Education services (schools, nurseries, universities, etc.)
		Employment opportunities
		Cost of living (expenses on housing, food, etc.)
		Existence of professional courses (computers, crafts, hairdressing, etc.)
2.	Economy	Access to credit (facilitated payment terms in shops and commerce)
	5	Variety of commercial and service establishments (markets, shops, restaurants, banks,
		post office, etc.)
		Existence of tourist activities
		Number of green areas and parks
		Quality and maintenance of green areas and parks
		Existence of places to take part in outdoor sports
3.	Culture and	Existence of places for cultural activities (artistic events, museums, theatres, cinemas)
	recreation	Opportunities to take part in free cultural and artistic events
		Conservation of historical, artistic, and cultural heritage (buildings, houses, and public
		spaces)
		Quality of public transport (comfort)
		Availability of public transport (number of lines and itineraries)
		Ease of going from one's house to other parts of the city (workplace, study, friends'
4.	Urban mobility	houses, etc.)
	Crountmooning	Ease of displacement on foot (to carry out daily activities)
		Quality and location of cycle paths
		Existence of tourist activities
		Conviviality and interaction with neighbours
		Conviviality and interaction with homeless people
		Opportunities to participate in the decisions of your own building
5.	Conviviality	Opportunities to participate in community activities (associations, artistic and religiou
		groups, etc.)
		Respect for cultural, sexual, religious, and political differences
		Identification with the neighbourhood and people's pride in living in it
		Feeling of security in public places (pavement, street, etc.)
		Feeling of security when accessing one's building during the day
		Feeling of security when accessing one's building at night
6.	Security	Safety for children and teenagers to experience the neighbourhood (walking, playing,
0.		etc.)
		Quality of policing
		Quality of public lighting (sidewalks, streets, parks, etc.)
		Noise pollution
		Air pollution (feeling when breathing)
	Environmental comfort	Existence of trees on the pavements and in the parks (climate comfort)
7.		Cleanliness of public spaces (pavements, streets, parks, etc.)
		Drainage and sewage system (floods/odours)
		View from one's apartment window to the outside space (street/courtyard)
		view from one's apartment window to the outside space (sheet/courtyard)

3. Urban Quality of Life (QoL) Indicators

QoL Dimensions		Urban QoL Indicators
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		Existence of professional courses (computers, crafts, hairdressing, etc.)
2.	Economy	Access to credit (facilitated payment terms in shops and commerce)
		Variety of commercial and service establishments (markets, shops, restaurants, banks,
		post office, etc.)
		Existence of tourist activities
		Number of green areas and parks
		Quality and maintenance of green areas and parks
	Culture and	Existence of places to take part in outdoor sports
3.	recreation	Existence of places for cultural activities (artistic events, museums, theatres, cinemas)
	recreation	Opportunities to take part in free cultural and artistic events
		Conservation of historical, artistic, and cultural heritage (buildings, houses, and public
		spaces)
		Quality of public transport (comfort)

Urban Quality of Life: A Systematic Literature Review

Urban Science

Urban Science





Artide Urban Quality of Life: A Systematic Literature Review

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Abstract: The built environment has great influence over the sustainability of societies as well as over people's quality of life. Quality of life (QoL) is a broad concept that has different definitions across diverse bodies of knowledge. The social-cultural environment and the characteristics of the built environment influence people's perception of QoL. This study aims to identify and analyse the factors that impact QoL and sustainable development in the urban context. A systematic literature review was developed to understand QoL concepts and to identify urban indicators that contribute to the multidimensional evaluation of urban QoL. The results include (1) a holistic overview of QoL concepts and indicators; (2) the proposal of a holistic urban QoL concept; (3) the identification of urban QoL dimensions and indicators that contribute to urban QoL evaluation. The main contribution of this study is its discussion of the multidimensional nature of QoL, including objective and subjective dimensions.

Keywords: urban quality of life; sustainable development; urban indicators; objective indicators; subjective indicators; systematic literature review





URBAN QUALITY OF LIFE

A Systematic Literature Review

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