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Bibliometric Analysis on Liveable Concept from the Perspective of Neighbourhood

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Abstract

The concept of liveable has been discussed since 1990's, yet there is no definite definition for liveable as the concept relies on what the community wants in their neighbourhood areas. The concept is challenging in terms of content-wise and in many ways being viewed in cross-disciplinary with multi-dimensional research domains. In this review, bibliometric analysis has been applied to the field of liveable in order to identify fundamental aspects and to obtain a structured overview on the characteristics and its developments in the research domain. The Web of Science (WoS) and Scopus search engines were used to explore online databases for frameworks or concepts related to the idea of liveability normally used in neighbourhood studies. These databases were chosen because they contain a wide range of social science topics, which makes them ideal for this area of study. Advanced bibliometric tools were used by using VOSviewer and ScientoPY software. n total, 229 publications published between 1990 to 2024 relevant to liveable were identified in Web and Science (WoS) and Scopus. The review discusses influential material according to (1) the trends in liveable context between the years, (2) countries origin contributed to liveability, (3) authors who have published extensively on liveability in the field, and (4) most cited publication. The results indicate what has been captured on the aspect for a contextual consideration in Malaysia. This includes perspectives of aspects that might not be considered due to the uniqueness of the country.

Keyword: Bibliometric Analysis, Liveable, Neighbourhood

Introduction

The idea of a neighbourhood has been discussed and subsequently put into practice since 1990. The idea of liveability is one of the contemporary neighbourhood principles that have been introduced and used. Many academics have studied the neighbourhood notion in great detail throughout the years. This trend is still increasing.

Since it primarily depends on personal objectives and preferences for one's ideal neighbourhood, the term "liveable" lacks a widely accepted meaning. Nonetheless, it is

frequently linked to the idea of life quality and the appropriateness of a location for habitation. A community's social cohesiveness, environmental quality, cultural possibilities, infrastructure, safety, and accessibility are just a few of the many elements that go into making a place liveable. People may define a good quality of life differently since they have various needs and views. For some, liveability might mean proximity to nature and tranquillity, while for others, it could involve vibrant city life and access to modern amenities. In the end, liveability is a subjective term influenced by individual expectations and beliefs. Poor urban settings have long been linked to widespread diseases, which pose serious risks to the health and well-being of city dwellers over the course of their lifetimes (Bassett and Howerton, 2014). A new trend brought to light by the COVID-19 pandemic is the need for communities to unite in order to preserve resilience and mental health. The idea of liveability has long been used as a pillar of healthy and sustainable urban living.

A neighbourhood's high level of well-being, life satisfaction, and general quality of life are often associated to its liveability (Mittal, Chadchan, and Mishra, 2020; Paul and Sen, 2020). With the rapid pace of urbanization and increasing densification of cities, liveability has become a crucial research topic, reflecting its growing significance in urban planning and development. A community's living conditions can be improved by a complex interaction of physical and socio-cultural elements that make up liveability (Jomehpour, 2015; Paul and Sen, 2020). These elements, which are crucial in determining the general quality of life, may include accessibility to green areas, public facilities, reasonably priced housing, effective transit, community involvement, safety, and inclusion.

The concept of neighbourhood liveability frequently refers to the extent to which locals enjoy the well-being, life satisfaction and quality of life (Mittal, Chadchan, and Mishra, 2020; Paul and Sen, 2020). With the accelerating trends of urbanization and the densification of cities, the liveability of neighbourhoods has emerged as a critical area of research. A community's living conditions are improved by its complex interactions of physical and sociocultural elements that make up liveability (Jomehpour, 2015; Paul and Sen, 2020). These components, together create an environment that supports a prosperous urban living, including things like public facilities, green space accessibility, a feeling of community, and the preservation of cultural identity.

This importance of the study is on the context of existing theories and case study setting which is Malaysia. The existing theories indicate the liveable aspects and attributes that might not looking into the uniqueness of social demographic in developing countries. Current ideas highlight liveability aspects and attributes do not account and yet need to be assessed. Liveability is a complex social structure that is driven by possibility comprising the relationships that the community has built. It reflects the living experience of the community, a neighbourhood's liveability is therefore essential to the prosperity and expansion of cities.

Thus, this review aims to examine the aspect of liveability that has emerged since, by integrating bibliometrics methods. Based on the dataset, the discussion addresses the following highlights:

- Trends of liveable
- Countries that have contributed to liveability

- Authors who have published extensively on liveability /the most influential authors in the field
- Most cited publication

It brings about changes in liveable neighbourhoods including environment, social and economic aspects and attends to the gaps in the existing body of research (as an academic contribution). The significant of the study provide better understanding of the actual needs on specific aspects and attributes, in this case, the liveable neighbourhood, for instance, the criteria on neighbourhood level is less considered in Malaysia as a measurement in order to achieve the liveable cities. Other than that, the study contributes to the body of knowledge for policy makers and stakeholders in urban planning and housing development in implementing liveable neighbourhood.

Methodology

The Web of Science (WoS) and Sopus search engines were used to explore online databases for frameworks or concepts related to the idea of liveability that may be used in neighbourhood guidelines. These databases were chosen because they contain a wide range of social science topics, which makes them ideal for this area of study. Advanced bibliometric tools were used to increase the study's analytical depth. In particular, word co-occurrence networks and collaboration networks between researchers and institutions were created and visualised using VOSviewer and ScientoPY software. These resources provide important insights into the development and interrelationships of the research topic by facilitating a thorough examination of links, trends, and major themes.

VOSviewer (version 1.6.5) was used to generate the social networks in this study. Van Eck and Waltman who develop the VOSviewer claim that the bibliometric networks that VOSviewer displays are based on distance and that each network is made up of numerous nodes that have been mapped using "visualisation of similarities" (VOS) in two dimensions. Additionally, it is optional to add edges between nodes. Every node stands for a single phrase, author, publication, etc. The distance between two nodes denotes their approximate relatedness, whereas the node's size indicates the co-occurrence or occurrence value (Van Eck et al., 2014). Furthermore, clusters can be formed by VOSviewer based on the close relationship between nodes, and each cluster may have nodes that show in different colours (Van Eck et al., 2010). The writers' collaborative arrangements are plainly visible in a co-authorship network, where the nodes stand in for the authors and the edges linking them show that they have published works jointly. A phrase taken from the publication's title and abstract in the dataset is represented by one node in a co-word network. The clusters of all phrases can be used to identify study hotspots. The following section provides an analysis of the specific findings.

ScientoPY was applied including features offering sciencometric analysis. In this case, ScientoPY preparation includes document type filtering, field tag correlation, author name normalisation, duplicate removal, times cited, and country/institution extraction to enhance the dataset's readability and accuracy (Ruiz-Rosero et al.,2019) The preprocessing brief table and preprocessing brief graph provide a summary of the preprocess outcomes. Next, inside a chosen criterion field (author names, country, author keywords, etc.), may use several operations in the data analysis to extract the top topics, specific subjects trends, topic search

based on wildcards, or trending themes. Lastly, the visualisation stage allows us to see the outcomes of the data analysis process using a variety of graph styles, including word clouds, timeline graphs, bar graphs, and evolution graphs.

The data used in this study was extracted on January 10, 2025, and covers the years 1990–2024. The 34-year period was split into four segments in order to examine the emerging trends in liveable research: 1990–2000; 2001–2010; 2011–2020; and 2021–20124. A detailed timeline for examining trends, patterns, and relationships within the subject area is provided by this comprehensive dataset. By using the combinations of search terms to collect relevant publications. In this review used keyword “liveable” AND “neighbourhood” AND “aspects” as the a topic, and there were 761 papers or journals found. All titles and abstracts were screened to get the purposes, elements and principles of a liveable neighbourhood related to sustainable development and social well-being. After the screening process of all the relevant keywords, only 229 papers were relevant and closely related in developing the conceptual framework for this review as shown in Table 1. Snowball technique is used to get the appropriate papers based on thorough selection of the key words which were set.

Table 1
Publication indexed in WoS and Scopus Databased

Database	Original Record Count	Duplicate	Actual Paper Count	Percentage (%)
Web of Science (WoS)	292	175	117	51
Scopus	496	384	112	49
		Total	229	100

Result

A. Publishing trend of liveable related publication

Figure 1 displays the trend in the number of publications from 1990 to 2024 as well as the frequency of publications by year. Few papers were published between 1990 and 2000, as can be shown. The number of publications started to rise after 2000, and between 2011 and 2020 there are an additional 100 publications. Since then, there has been a gradual increase in the number of publications annually, suggesting that liveable research has drawn greater attention.

Figure 2 illustrates the average number of citations per publication annually from 1990 to 2024 as well as the frequency of citations of liveable articles by year. There are over 250 citations for publications published between 2014 and 2022, with publications from 2015 having the most higher citation, which is nearly 650. The value peaks in 2007 (76.00) when it comes to the average number of citations per publication year, meaning that publications released in that year received the average of 76 citations annually. In addition, the average number of citations received by publications from 2014 to 2022 was higher than the average number of citations received by annual publications.

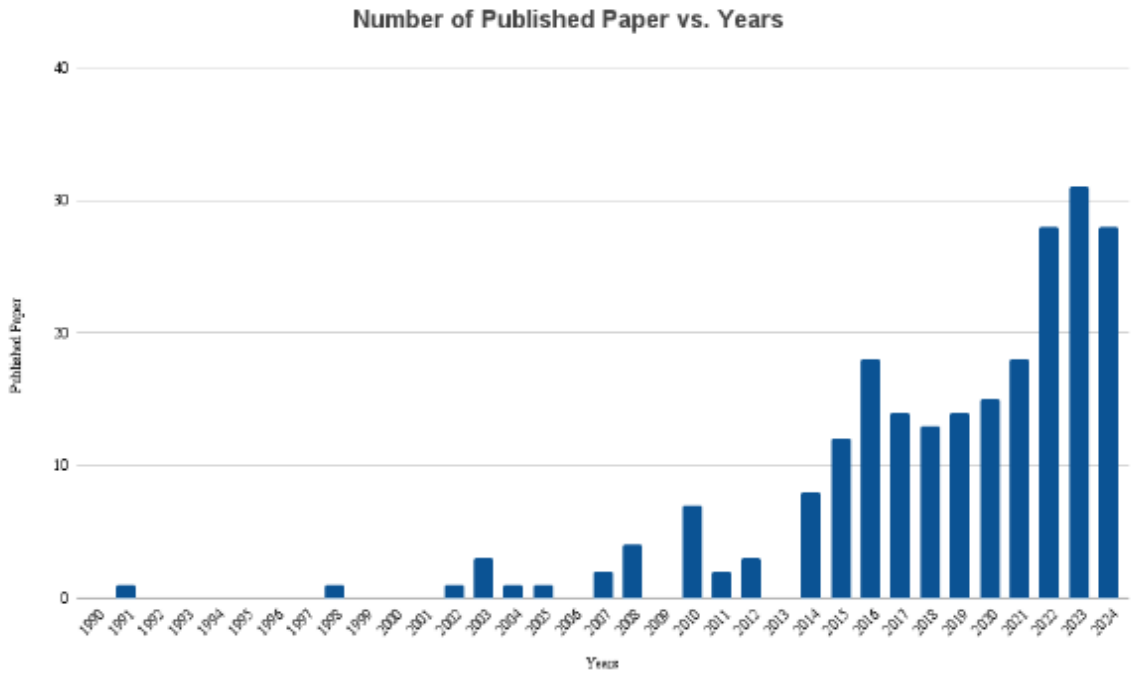

Fig. 1 Number of published papers vs. years in liveable field

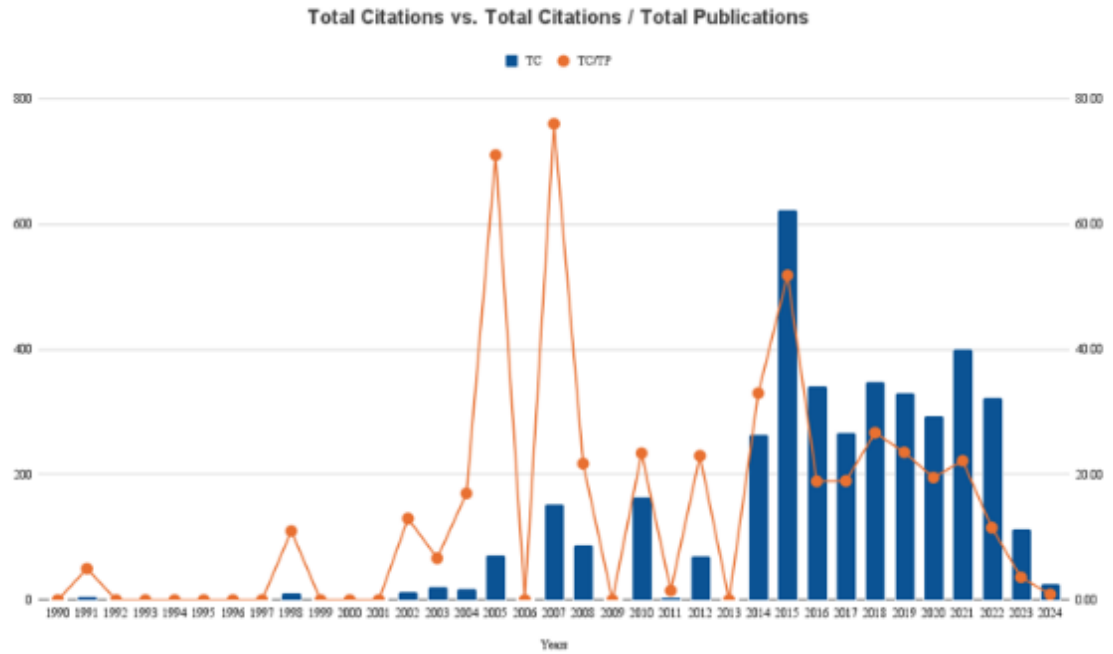

Fig. 2 Total citations vs. total citations/ total publications

B. Countries that have Contributed to Liveable

Table 2 lists the values of total publications (TP), total citations (TC) and average number of citations per publication year (TC/TP) of the 10 most productive countries. Based on this table, it can be determined that the publishing trends in these countries in the liveable field are with four different periods. Australia has the highest numbers of publications, 81 in total which indicates that Australia played a leading role in the early development of liveable research. In consequence, Australia is the 4th most liveable city in the world by Global Liveability Index.

For the first 10 years between 1990 to 2000, only Australia and India had published papers on the topic. During the second period between 2001 and 2010, apart from Australia, other countries such as the United Kingdom, Netherlands, China, Canada and Italy began paying more attention to liveable research. Later, Malaysia, New Zealand and Singapore began to contribute to the field. The following years (2011 to 2020), the number of publications from Australia has significantly increased. Australia has risen to 53 between 2011 and 2020, which is eight times higher than the number before. In the last 4 years, the publication has decreased in Australia despite increasing numbers in other countries.

Although Singapore only has 8 publications through the periods, the value of TC/TP is much higher than the other most of the top ten productive countries. Then followed by Australia and New Zealand who have higher average of citations. The publications from China have quite high average citations, which is slightly higher than the value of TC/TP of the United Kingdom and Netherlands. Same goes to Canada, which has a higher average of citations even though the publications are not higher than Malaysia.

Table 2
Top 10 Productive Countries in four Different Periods

No.	Country	TP	TC	TC/TP	1990-2000		2001-2010		2011-2020		2021-2024	
					TP	TC	TP	TC	TP	TC	TP	TC
1	Australia	81	2531	31.25	1	11	6	356	53	1819	21	345
2	United Kingdom	31	622	20.06	0	0	4	240	14	237	13	145
3	Netherlands	13	218	16.77	0	0	1	13	5	141	7	64
4	China	12	330	27.50	0	0	1	135	4	58	7	137
5	Malaysia	12	80	6.67	0	0	0	0	7	72	5	8
6	Canada	11	166	15.09	0	0	2	17	6	106	3	43
7	Italy	10	40	4.00	0	0	1	3	2	13	7	24
8	New Zealand	9	276	30.67	0	0	0	0	4	208	5	68
9	India	8	15	1.88	1	5	0	0	1	8	6	2
10	Singapore	8	297	37.13	0	0	0	0	5	287	3	10

**TP, Total Publications; TC, Total Citations*

C. Influential journal in liveable field

Based on statistical analysis, Table 3 lists the 20 most prominent journals in liveable, sorted by TP and TC, respectively, to identify which journals publish papers linked to liveable and obtain more citations. In terms of both TP and TC values, it shows that Health & Place is at the top. There are also a significant number of papers and citations in the liveable from the *International Journal of Behavioural Nutrition and Physical Activity*. According to the ranking of 20 journals based on TP and TC in Table 3, it is seen that liveable do not receive much publication, but three journals have received more than 200 citations. There are five journals – *Cities; Journal of Transport & Health; Built Environment; Landscape and Urban Planning; and Applied Geography;* that have earned a lot of citations while having fewer than five publications about liveability. Additionally, the *Journal of Urban Regeneration and Renewal; the International Journal of Environment Research and Public Health; and the IOP Conference Series: Earth and Environment Science;* are the three journals with the highest TP and significantly lower TC values. When comparing these top ten journals by TC, it is discovered that *Sustainable Cities and Society; Landscape and Urban Planning; and Cities;* have significantly higher impact factor (IF) values.

Table 3
Top 10 Most influential journals ranked according to TP

Rank	Title	TP	TC	TP/TC	If (2023)	CQ
1	*Health & Place*	12	416	34.67	3.800	Q1
2	*International Journal of Behavioral Nutrition and Physical Activity*	8	355	44.38	5.600	Q1
3	*Sustainability*	6	97	16.17	3.300	Q2
4	*Journal of Urban Regeneration and Renewal*	5	20	4.00	-	-
5	*BMJ OPEN*	4	46	11.50	2.400	Q1
6	*Cities*	4	147	36.75	6.000	Q1
7	*International Journal of Environment Research and Public Health*	4	22	5.50	4.614	Q1
8	*IOP Conference Series: Earth and Environment Science*	4	1	0.25	-	-
9	*Journal of Transport & Health*	4	147	36.75	3.200	Q2
10	*Archnet-IJAR: International Journal of Architectural Research*	3	30	10.00	-	-
11	*Built Environment*	3	132	44.00	-	-
12	*Journal of Epidemiology and Community Health*	3	96	32.00	4.900	Q1
13	*Landscape and Urban Planning*	3	149	49.67	7.900	Q1
14	*Preventive Medicine*	3	234	78.00	4.300	Q1
15	*Planning Malaysia*	3	18	6.00	-	-
16	*Social Science & Medicine*	3	82	27.33	4.900	Q1
17	*Sustainable Cities and Society*	3	54	18.00	10.500	Q1
18	*Urban Planning*	3	19	6.33	1.700	Q3
19	*WIT Transactions on Ecology and the Environment*	3	3	1.00	-	-

20	*Applied Geography*	2	116	58.00	4.000	Q1

**TP, Total Publications; TC, Total Citations; ; IF, Impact Factor; CQ, Category Quartile*

D. Authors have contributed to liveable research

The top 10 influential writers in the liveable field are included in Table 4 along with their institution, TP, TC, TC/TP, and h-index, arranged by TC. Giles is ranked top author since he has the highest TC and TP. Turrell comes next, and his TC value differs from Giles by more than 600. Third-place scorer Hooper is followed by Badland, who has more writings on liveability than Hooper. Even though Cook and Cooper have only seven publications to their names, similar to Boulange, they are ranked ninth and tenth by TC, respectively, according to the TC/TP value. This is because one of Boulange's publications achieved significantly more citations than others, as shown in Table 5 (most cited). Moreover, these ten researchers have touched on various aspects of research and helped to build viable research. According to Table 5, eight of the ten most significant authors were Australian. In the last 20 years Australia have made significant contributions to liveable research based on the number of publications and have more than 1000 citation.

Table 4
Top 10 Most influential journals ranked according to TP

**TP, Total Publications; TC, Total Citations*

No.	Author	Institution	TP	TC	TP/TC	*h*-Index
1	Giles-Corti, B.	RMIT University, Australia	40	1370	34.25	27
2	Turrell, G.	University of Western Australia (UWA)	19	734	38.63	17
3	Hooper P.	RMIT University, Australia	12	436	36.33	8
4	Badland, H.	University of Queensland, Australia	14	382	27.29	10
5	Mavoa, S.	University of Melbourne, Australia	9	353	39.22	7
6	Foster, S.	University of Melbourne, Australia	9	306	34.00	8
7	Rachele, J.N.	University of Melbourne, Australia	11	256	23.27	9
8	Boulange, C.	University of Western Australia (UWA)	7	205	29.29	6
9	Cook, D. G.	University of London, UK	7	84	12.00	7
10	Copper, A.R.	University of Bristol, UK	7	84	12.00	7

E. Influential publications in liveable field

The most influential publications in the liveable field ranked according to total citations (TC) in Table 6. It is seen that the top three publications were by Giles-Corti B. et. al with 137 citations; du Toit L. et. al with 135 citations and Villanueva *et. al* with 111 citations in the current dataset. Most of these 30 publications came out during the periods between 2007 to 2022. Among these 30 papers, 3 publications were cited more than 100 times. According to the titles

of these 30 publications, it is found that the liveable research involved many aspects including environment, open spaces, walkability, safety, transportation and others.

Table 5
Top 30 Most cited publications

No	Title	Author	Keyword	Year	Country	Total Citation
1	Evaluation of the implementation of a state government community design policy aimed at increasing local walking: Design issues and baseline results from RESIDE, Perth Western Australia	Giles-Corti B.; Knuiman M.; Timperio A.; Van Niel K.; Pikora T.J.; Bull F.C.L.; Shilton T.; Bulsara M.	Environment; Longitudinal; Neighborhood; Physical activity measurement; Urban design; Walking	2008	Australia; United Kingdom	137
2	Does walking in the neighbourhood enhance local sociability?	du Toit, L.; Cerin, E.; Leslie, E.; Owen, N.	Walking, Neighbourhood, Social	2007	Australia; China	135
3	Developing indicators of public open space to promote health and wellbeing in communities	Villanueva, K.; Badland, H.; Hooper, P.; Koohsari, M.J.; Mavoa, S.; Davern, M.; Roberts, R.; Goldfeld, S.; Giles-Corti, B.	Public open space; Indicators; Liveability; Policy; Health; Built environment	2015	Australia; New Zealand	111
4	Do changes in residents' fear of crime impact their walking? Longitudinal results from RESIDE	Foster, S.; Knuiman, M.; Hooper, P.; Christian, H.; Giles-Corti, B.	Fear of crime; Walking; Physical activity; Longitudinal; Natural experiment; Neighbourhood	2014	Australia	83
5	Associations between the neighbourhood built environment and out of school physical activity and active travel: An examination from the Kids in the City study	Oliver, M.; Mavoa, S.; Badland, H.; Parker, K.; Donovan, P.; Kearns, R.A.; Lin, E.Y.; Witten, K.	Child; Neighbourhood; Walkability; Active travel; Walk; Cycle	2015	New Zealand; Australia	81
6	Cycling for transport and recreation: Associations with the socio-economic, natural and built environment	Heesch, K.C.; Giles-Corti, B.; Turrell, G.	Active transport; Active travel; Physical activity; GIS; Environment; Correlate; Neighbourhood	2015	Australia	71

7	Identifying, creating, and testing urban planning measures for transport walking: Findings from the Australian national liveability study	Badland, H.; Mavoa, S.; Boulange, C.; Eagleson, S.; Gunn, L.; Stewart, J.; David, S.; Giles-Corti, B.	Geographic information system; Health; Neighbourhood; Policy; Spatial	2017	Australia	63
8	Safe RESIDential Environments? A longitudinal analysis of the influence of crime-related safety on walking	Foster, S.; Hooper, P.; Knuiman, M.; Christian, H.; Bull, F.; Giles-Corti, B.	Safety from crime; Perceptions; Longitudinal; Walking; Built Environment; Adults	2016	Australia	61
9	Associations between individual socioeconomic position, neighbourhood disadvantage and transport mode: baseline results from the HABITAT multilevel study	Rachele, J.N.; Kavanagh, A.M.; Badland, H.; Giles-Corti, B.; Washington, S.; Turrell, G.	Socioeconomic, Transportation, Neighbourhood	2015	Australia	58
10	Changes in perceptions of urban green space are related to changes in psychological well-being: Cross-sectional and longitudinal study of mid-aged urban residents	Cleary, A.; Roiko, A.; Burton, N.W.; Fielding, K.S.; Murray, Z.; Turrell, G.	Urban green space, Perception, Phycological well-being	2019	Australia	52
11	Liveable for whom? Prospects of urban liveability to address health inequities	Badland, H.; Pearce, J.	Built environment; Inequality; New urban agenda; Social determinants of health; Social gradient; Sustainable development goals; Urban justice	2019	Australia; United Kingdom	49
12	Is practice aligned with the principles? Implementing New Urbanism in Perth, Western Australia	Falconer R.; Newman P.; Giles-Corti B.	Car dependence; Liveable neighbourhoods; New Urbanism; Perth	2010	Australia	48
13	Using walkability measures to identify	Jeffrey, D.; Boulange, C.;	Walkability, Measuremnet	2009	Australia	47

	train stations with the potential to become transit-oriented developments located in walkable neighbourhoods	Giles-Corti, B.; Washington, S.; Gunn, L.				
14	Designing healthy communities: creating evidence on metrics for built environment features associated with walkable neighbourhood activity centres	Gunn, L.D.; Mavoa, S.; Boulange, C.; Hooper, P.; Kavanagh, A.; Giles-Corti, B.	Transport walking; Planning policy; Built environment; Urban design; Neighbourhood activity/town centre; Cluster analysis; Land use mix; Geographic information systems	2017	Australia	45
15	The building blocks of a 'Liveable Neighbourhood': Identifying the key performance indicators for walking of an operational planning policy in Perth, Western Australia	Hooper, P.; Knuiman, M.; Foster, S.; Giles-Corti, B.	Planning policy; Liveable neighbourhoods; Walking; Health; Built environment	2015	Australia	42
16	Are liveable neighbourhoods safer neighbourhoods? Testing the rhetoric on new urbanism and safety from crime in Perth, Western Australia	Foster S.; Hooper P.; Knuiman M.; Bull F.; Giles-Corti B.	Built environment; Crime; New urbanism; Planning policy; Safety; Victimisation	2016	Australia	42
17	Testing spatial measures of public open space planning standards with walking and physical activity health outcomes: Findings from the Australian national liveability study	Hooper P.; Boruff B.; Beesley B.; Badland H.; Giles-Corti B.	Physical activity; Policy; Public open space; Urban planning; Walking	2018	Australia	42
18	Do differences in built environments explain age differences in transport walking across neighbourhoods?	Ghani, F.; Rachele, J.N.; Loh, V.H.Y.; Washington, S.; Turrell, G.	Transport, walking; Age; Neighbourhoods; Built environment	2018	Australia	41
19	Liveability aspirations	Lowe M.;	Geographic	2022	Australia	38

	and realities: Implementation of urban policies designed to create healthy cities in Australia	Arundel J.; Hooper P.; Rozek J.; Higgs C.; Roberts R.; Giles-Corti B.	inequities; Healthy cities; Indicators; Liveability; Policy implementation; Spatial analysis; Walkability			
20	Neighbourhood built environment and physical function among mid-to-older aged adults: A systematic review	Rachele, J.N.; Sugiyama, T.; Davies, S.; Loh, V.H.Y.; Turrell, G.; Carver, A.; Cerin, E.	Neighbourhood, Built environment, Aged Adults	2019	Australia; China	38
21	Examining associations between area-level spatial measures of housing with selected health and wellbeing behaviors and outcomes in an urban context	Badland, H.; Foster, S.; Bentley, R.; Higgs, C.; Roberts, R.; Pettit, C.; Giles-Corti, B.	Australia; Geographic information systems; Liveability; Policy; Urban planning	2017	Australia	35
22	The effects of built environment attributes on physical activity-related health and health care costs outcomes in Australia	Zapata-Diomedi, B.; Herrera, A.M.M.; Veerman, J.L.	Built environment; Physical activity; Health; Economic evaluation; Health impact assessment	2016	Australia	35
23	Does heightened fear of crime lead to poorer mental health in new suburbs, or vice versa?	Foster, S.; Hooper, P.; Knuiman, M.; Giles-Corti, B.	Fear of crime; Psychological distress; Longitudinal; Walking; Social cohesion; Suburban; Adults	2016	Australia	33
24	Reconnecting urban planning with health: A protocol for the development and validation of national liveability indicators associated with noncommunicable disease risk behaviours and health outcomes	Giles-Corti B.; Badland H.; Mavoa S.; Turrell G.; Bull F.; Boruff B.; Pettit C.; Bauman A.; Hooper P.; Villanueva K.; Astell-Burt T.; Feng X.; Learnihan V.; Davey R.; Grenfell R.; Thackway S.	Health, Liveable indicators	2014	Australia; United Kingdom	32
25	Are we developing walkable suburbs through urban planning policy?	Hooper, P.; Knuiman, M.; Bull, F.; Jones, E.; Giles-Corti, B.	Walking; Planning policy; Cluster analysis; Built environment;	2015	Australia	31

	Identifying the mix of design requirements to optimise walking outcomes from the 'Liveable Neighbourhoods' planning policy in Perth, Western Australia		Evaluation; New urbanism; Liveability health promotion			
26	Physical activity-related health and economic benefits of building walkable neighbourhoods: a modelled comparison between brownfield and greenfield developments	Zapata-Diomedi, B.; Boulange, C.; Giles-Corti, B.; Phelan, K.; Washington, S.; Veerman, J.L.; Gunn, L.D.	Urban form; Built environment; Physical activity; Health and economic benefits; Health impact assessment; Evaluation; Public health; Brownfield; Greenfield; Development	2019	Australia	29
27	Neighbourhood disadvantage and self-reported type 2 diabetes, heart disease and comorbidity: a cross-sectional multilevel study	Rachele, J.N.; Giles-Corti, B.; Turrell, G.	Type 2 diabetes; Heart disease; Comorbidity; Chronic disease; Neighborhood disadvantage; Socioeconomic disadvantage; Multilevel	2016	Australia	27
28	Living liveable? RESIDE's evaluation of the Liveable Neighborhoods planning policy on the health supportive behaviors and wellbeing of residents in Perth, Western Australia	Hooper P.; Foster S.; Bull F.; Knuiman M.; Christian H.; Timperio A.; Wood L.; Trapp G.; Boruff B.; Francis J.; Strange C.; Badland H.; Gunn L.; Falconer R.; Learnihan V.; McCormack G.; Sugiyama T.; Giles-Corti B.	Liveable neighbourhood, Health, Well-being, Policy	2020	Australia; Switzerland; Canada	24
29	Neighbourhood socioeconomic and transport disadvantage: The potential to reduce	Rachele, J.N.; Learnihan, V.; Badland, H.M.; Mavoa, S.;	Transport disadvantage; Neighbourhood disadvantage;	2017	Australia	22

	social inequities in health through transport	Turrell, G.; Giles-Corti, B.	Socioeconomic background policy; Review; Urban planning			
30	Creating and applying public transport indicators to test pathways of behaviours and health through an urban transport framework	Badland, H.M.; Rachele, J.N.; Roberts, R.; Giles-Corti, B.	Geographical information systems; Liveability; Policy; Travel; Urban planning	2017	Australia	21

F. Research focuses in different periods

The keyword as a research theme on liveable and the co-word networks in various years are illustrated in Figure 3. When generating these co-word networks, a rule was established where a term must appear at least ten times. In this case, the keywords have appeared 10 times from the years 2018 to 2024. According to our dataset's search technique, terms like ‘open space’, ‘safety’, and ‘transport’, which are associated with creating a liveable region, are not included in the terms because they are found in practically every publication. The words used in liveable research have undoubtedly grown over the past forty years, and there have also been some shifts in the research's focus.

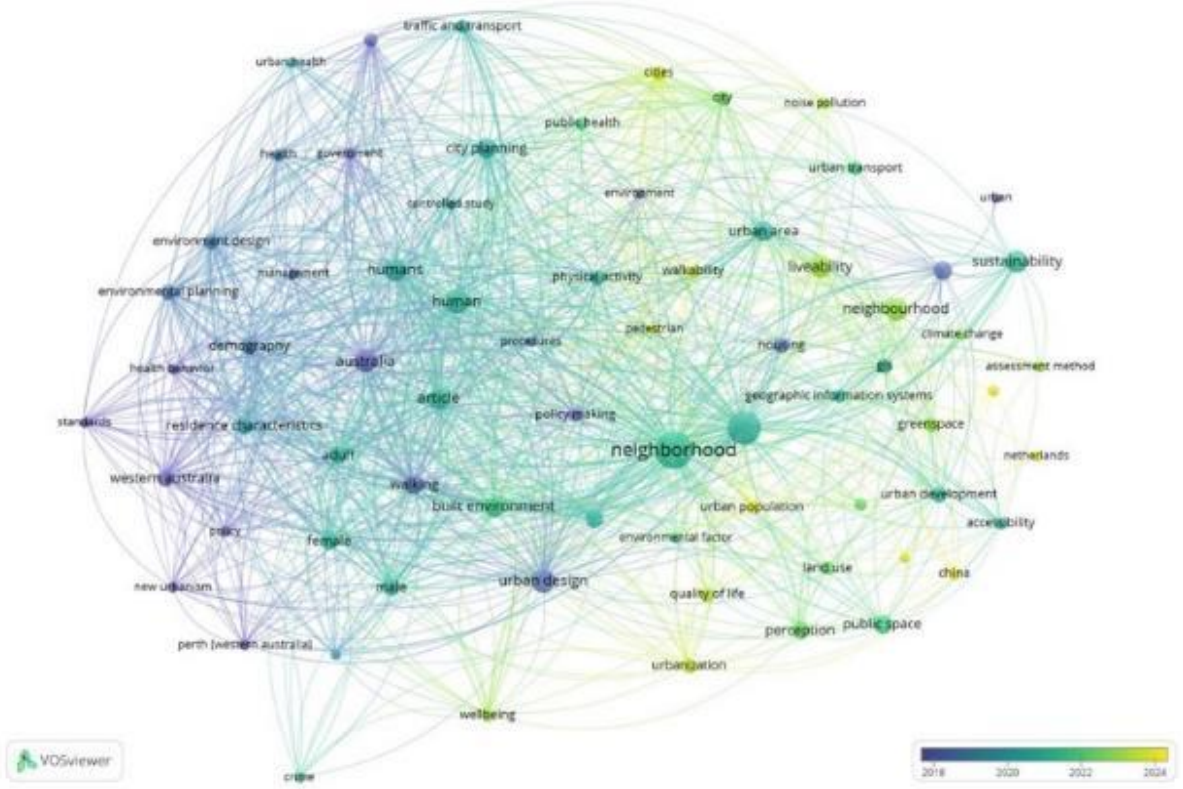

Figure 3 Word co-occurrence network built using works present in titles and abstracts of document published between 2018-2024

Early on, purple-blue tones are used to represent subjects including crime, public health, transit and traffic, urban health, government, demographics, health behaviour and policy as well as a mention of country such as Western Australia. This implies in the 2018 to 2020, the study focused on issues related to urban safety, transportation, public health, and

demographics. In the 2020 to 2022, there is a lot of emphasis on the neighbourhood, urban design, built environment, human, residence characteristics, walking, and physical activity. Research shifted towards neighbourhood design, built environment, and the relationship between urban spaces, physical activity and walking. Additionally, research based in Australia is becoming more popular, which reflects regional distinctiveness.

However, in recent years, green-yellow tones (2022-2024) have been used to represent sustainability, liveability, urban transportation, cities, quality of life, public space, accessibility, green space, GIS, and climate change. It shows that sustainability, quality of life, green infrastructure, and the application of GIS and spatial analysis techniques have received attention recently. Topics like urban population, urbanization, and perception also reflect an increasing interest in the human experience and expanding urban areas. The summary is on Table 6.

Table 6
Publication indexed in WoS and Scopus Databases

Period	Key Themes	Focus Areas
2018 – 2020 (Purple-Blue tones)	Crime, Public Health, Traffic, Demography, Government	Health, Safety, Policy
2020-2022 (Blue-Green tones)	Built Environment, Neighbourhood, Urban Design, Physical Activity, Walking	Urban Planning, Active Living
2022-2024 (Green-Yellow tones)	Sustainability, Liveability, Public Space, Green Space, Climate Change, GIS, Quality of Life, Accessibility	Sustainable Urbanism, Environmental Quality, Technology

Discussions

There is a broadening geographic distribution of research interest, indicating that liveability is increasingly a global concern. Publications in this field of study have been on the rise since 2000, which reached a peak between 2011 and 2020. In 2015 related papers received the most citations (650), while the greatest average (76 per year) was recorded in 2007. This shows, from 2011, the field has been discussed and received more debate by the author's from different perspectives. Leading the topic of liveability research is the Journal of Health & Place, followed by the International Journal of Behavioural Nutrition and Physical Activity. Despite the small number of papers with specific keywords on liveability research, three journals have accumulated more than 200 citations.

Giles is the most prominent author in liveability research, followed by Turrell and Hooper. With more than 1,000 citations, eight of the top 10 authors are Australian, underscoring the country's significant contributions to liveability research during the previous 20 years. As seen, Australia and the United Kingdom dominate as pioneers in liveable neighbourhood research. While Germany and Malaysia reflect growing engagement in urban development and sustainability topics. France and Turkey indicate increased interest in the research, possibly driven by urbanisation challenges and policy shifts in those countries.

In addition, the majority of liveable research during the period of 2018–2020 focuses on social factors, with emphasis on demographics, safety, transportation, and health. The tendency of the research looked at how accessible transportation networks are, how public safety affects community's' quality of life, and how demographics like age, income, and social diversity affect neighbourhood liveability. Researchers also looked at the role of public health initiatives, crime prevention strategies, and government policies in shaping urban environments that support safe and inclusive communities.

This foundational work set the stage for subsequent research (2020–2022) that went in depth into built environments, urban design, and sustainability by emphasising the crucial link between social factors and physical infrastructure in creating liveable neighbourhoods and communities. As research evolved, researchers began to give attention to planning elements, including on how the design of streets, public spaces, and housing influences quality of life for communities. The studies explored the physical effects of walkability, diverse land use, and green space accessibility. The shift was a reflection of a growing understanding that liveability extends beyond immediate social concerns and it also takes into account the larger environmental and structural factors that influence urban experiences. Additionally, researchers also looked at how neighbourhood layout and structure affect mobility, health, and general well-being, as the focus began to change into urban planning, built environments, and physical activity. The interest from this perspective includes examination as to how walkable streets, mixed-use developments and green areas might encourage social interaction and encourage active lives. At this point, there was a greater focus on how the built environment promotes diversity and guarantees accessibility for a range of demographics, such as the elderly and those with disabilities.

Following this, the research focuses on more niche areas related to neighbourhood design and how it relates to urban movement patterns within urban spaces. Researchers looked into how elements like street connectedness, pedestrian-friendly infrastructure, and accessibility to necessary services affect daily mobility and promote environmentally friendly modes of transportation including public transportation and cycling. This period also saw a rise in studies in spatial planning by incorporating technology such as Geographic Information Systems (GIS) and spatial analysis, to assess urban mobility trends and inform better planning strategies.

With an increasing interest in urbanisation and the human experience, recent studies (2022–2024) inclined to give emphasis on sustainability, quality of life, green infrastructure, GIS applications and climate change. This change reflects a greater emphasis on spatial planning, with a particular emphasis on how technology-driven solutions, environmental factors, and land use shape liveable neighbourhoods. More researchers are looking into how incorporating green infrastructure like parks, urban trees, and sustainable drainage systems improves public health and air quality as well as readiness resilience against climate change.

Overall, with the increasing challenges of modern life, several aspects of liveability also came into highlight. Due to current interest in crime patterns in Malaysia, including kidnappings both adults and children, frequently resulting in fatalities, safety has been a major concern in conversations about liveable communities even though it has been addressed since 2016. Alarmingly, many of these crimes occur within neighbourhood areas, and the offenders are within the neighbourhood. This provides further evidence that a neighbourhood must prioritise the safety and well-being of its community in addition to having well-designed areas. By 2025, smart city

developments are expected to contribute to security using the application of the latest technologies. High-end and gated communities frequently use measures like CCTV camera installation in residential areas, stringent access control using RFID or facial recognition, and security guards confirming guests before allowing them in. However, social cohesion is essential to maintaining safety in areas that are not gated or monitored. The sense of security can be greatly increased in a mindful and compassionate community where people watch out for one another and report suspicious activities.

Neighbourhoods that lack a safe atmosphere restrict social connections and outdoor activities, which are critical for both mental and physical health. A lack of security affects happiness and mental health by limiting socialising possibilities and decreasing community involvement. If safety concerns prevent residents from engaging in healthy social and physical activities, it could further contribute to mental health issues, making it even more challenging to achieve a truly liveable community. Liveability depends on social ties, which tend to be more important than physical infrastructure. Although infrastructure and services expand in conjunction with population development, social cohesiveness necessitates proactive measures.

In order to ensure strong community links, various initiatives are implemented to foster closer connections. One important idea in urban liveability is the circular economy, which encourages sustainability through recycling, waste reduction, and community composting (e.g., 3R initiatives). Other than that, low-carbon city efforts such as promoting walking, bicycling, and public transportation to reduce reliance on cars and emissions, and encouraging the use of solar panels, LED lighting, and energy-efficient home appliances to reduce power consumption. Promoting green projects within neighbourhoods, teaching locals about sustainable habits, and cultivating an environmentally conscious culture. In addition to this, urban farming has recently gained popularity among city dwellers who want to re-create rural living. They establish communal farming spaces, fostering a sense of togetherness. Urban farming not only strengthens social bonds within communities but also enhances food security and economic resilience, enabling the communities to reduce expenses and even generate income whereby the income could improve and beautify the neighbourhood. Additionally, economic sustainability is a key consideration when evaluating liveability given the growing urban poor and rising cost of living. Developing genuinely liveable neighbourhoods requires an understanding of how locals manage their income and preserve stability over the long run.

However, geopolitical factors have a big impact on community development since dedicated local officials may advocate for changes that make neighbourhoods more liveable. Previously, the majority of community programs were run by local authorities, but these days in 2025 it is significant if the neighbourhood shifts towards community-driven initiatives by encouraging communities to take charge of their communities programs instead of depending entirely on the local authorities. In order to make sure that planning and budgeting reflect their true needs rather than presumptions made by the local authority, the community must actively participate in decision-making. Neighbourhoods that are more sustainable and more liveable are promoted by a bottom-up strategy. Furthermore, disaster preparedness and climate resilience are essential for neighbourhoods. The community itself needs to plan for disaster response, preventive infrastructure, and community awareness initiatives are all components of effective risk management with help from political and local authorities. Cultural preservation is another element that is vanishing, yet is crucial to creating livable communities. Again, strengthening

community ties and embracing demographic diversity contribute to a more inclusive and harmonious environment. A decline in national identity and social cohesion can lead to disconnection and a lack of mutual respect among communities with different ages and races.

Conclusions

The concept of a liveable neighbourhood is about feeling happy, safe, and comfortable within the areas, but this definition varies depending on individual needs and life stages. While happiness often begins within the neighbourhood and community, external factors such as infrastructure, amenities, and urban design also play a crucial role in shaping a liveable environment. For some, a well-designed home creates happiness, while others may seek comfort in public spaces due to housing constraints. The difficulties posed by rapid urbanisation, including the cost of housing, the need for infrastructure and environmental sustainability are highlighted by research on liveability. Additionally, it highlights the human experience on how people view and engage with their environment, which shapes policies that support diversity, well-being, and long-term urban sustainability. While sustainable urban planning techniques, such as climate-resilient infrastructure and eco-friendly transportation, improve long-term liveability, studies demonstrate that access to green areas, walkable streets, and diversified land use have a good influence on both physical and mental health.

Beyond physical aspects, social cohesion is the foundation of a liveable neighbourhood. The community itself is the heart of the neighbourhood which brings it to life. As the population increases, physical infrastructure naturally develops, but conscious effort is needed to build strong community bonds. Liveability is not complete without a strong sense of community. A well-connected, pedestrian-friendly city with accessible amenities may enhance daily mobility and promote sustainable transportation. In order to guarantee that neighbourhoods are not just well-constructed but also genuinely connected and helpful, social interaction, trust, and inclusivity must be given top priority. In the end, liveability is influenced by infrastructure and amenities, but the most crucial element is the quality of social bonds inside a community.

References

Badland, H. and Pearce, J. (2019). Liveable for whom? Prospects of urban liveability to address health inequities. *Social science & medicine*, 232, 94–105. doi:10.1016/j.socscimed.2019.05.001

Badland, H. M., Rachele, J.N., Roberts, R. (2017). Creating and applying public transport indicators to test pathways of behaviours and health through an urban transport framework. J. Transp. Health.

Badland, H. (2017a). Examining associations between area-level spatial measures of housing with selected health and wellbeing behaviours and outcomes in an urban context. Health Place 43, 17–24.

Bassett, E. M., & Howerton, H. (2014). Designing the Healthy Neighborhood: Deriving Principles Fro. Hart Howerton, Ltd. and University of Virginia.

Cleary, A.; Roiko, A.; Burton, N.W.; Fielding, K.S.; Murray, Z.; Turrell, G. Changes in Perceptions of Urban Green Space Are Related to Changes in Psychological Well-Being: Cross-Sectional and Longitudinal Study of Mid-Aged Urban Residents. *Health Place* 2019, *59*, 102201.

Du Toit, L., Cerin, E., Leslie, E., Owen, N. (2007). Does walking in the neighbourhood enhance local sociability? Urban Stud. 44 (9), 1677–1695. https://doi.org/10.1080/00420980701426665.

Falconer, R., Newman, P., & Giles-Corti, B. (2010). Is practice aligned with the principles? Implementing new urbanism in Perth, Western Australia. *Transport Policy, 17*(5), 287–294.

Foster, S., Hooper, P., Knuiman, M., Christian, H., Bull, F., Giles-Corti, B. (2016). Safe RESIDential Environments? A longitudinal analysis of the influence of crime-related safety on walking. International Journal of Behavioral Nutrition and Physical Activity 13:1-9.

Foster, S., Hooper, P., Knuiman, M., Bull, F., Giles-Corti, B. (2016). Are liveable neighbourhoods safer neighbourhoods? Testing the rhetoric on new urbanism and safety from crime in Perth, Western Australia. Soc. Sci. Med. 164, 150–157. https://doi.org/10.1016/j.socscimed.2015.04.013.

Foster, S., Knuiman, M., Hooper, P., Christian, H., Giles-Corti, B. (2014). Do changes in residents' fear of crime impact their walking? Longitudinal results from RESIDE. Prev Med. 2014;62:161–6. https://doi.org/10.1016/j.ypmed.2014.02.011.

Foster, S., Hooper, P., Knuiman, M., Giles-Corti, B., 2016. Does heightened fear of crime lead to poorer mental health in new suburbs, or vice versa? Social Sci. Med. (1982), 168(NA), 30-34. https://doi.org/10.1016/j.socscimed.2016.09.004.

Giles-Corti, B., Badland, H., Mavoa, S., Turrell, G., Bull, F., Boruff, B., Pettit, C., Bauman, A., Hooper, P., Villanueva, K., Astell- Burt, T., Feng, X., Learnihan, V., Davey, R., Grenfell, R., & Thackway, S. (2014). Reconnecting urban planning with health: a protocol for the development and validation of national liveability indicators associated with noncommunicable disease risk behaviours and health outcomes. Faculty of Social Sciences - Papers (Archive), 25(1), 1. https://doi.org/10.17061/phrp2511405

Ghani, F., Rachele, J. N., Loh, V. H. Y., Washington, S., & Turrell, G. (2018). Do differences in built environments explain age differences in transport walking across neighborhoods? *Journal of Transport & Health*. https://doi.org/10.1016/j. jth.2018.03.010.

Giles-Corti, B., Knuiman, M., Timperio, A., van Niel, K., Pikora, T. J., Bull, F. C. L., Shilton, T., Bulsara, M. (2008). Evaluation of the implementation of a state government community design policy aimed at increasing local walking: design issues and baseline results from RESIDE, Perth Western Australia. Prev. Med. 46 (1), 46–54. https://doi.org/10.1016/j.ypmed.2007.08.002.

Heesch, K. C., Giles-Corti, B., & Turrell, G. (2014). Cycling for transport and recreation: Associations with socio-economic position, environmen- tal perceptions, and psychological disposition. Preventive Medicine, 63, 29–35. https://doi.org/10.1016/j.ypmed.2014.03.003.

Hooper, P., Foster, S., Bull, F., Knuiman, M., Christian, H., Timperio, A., Wood, L., Trapp, G., Boruff, B., Francis, J., Strange, C., Badland, H., Gunn, L., Falconer, R., Learnihan, V., McCormack, G., Sugiyama, T., Giles-Corti, B. (2020). Living liveable? RESIDE's evaluation of the "Liveable Neighborhoods" planning policy on the health supportive behaviors and wellbeing of residents in Perth, Western Australia. SSM Popul Health. 2020 Feb 4;10:100538. doi: 10.1016/j.ssmph.2020.100538. PMID: 32072006; PMCID: PMC7016024.

Hooper, P., Boruff, B., Beesley, B., Badland, H., Giles-Corti, B. (2018) Test- ing spatial measures of public open space planning standards with walking and physical activity

health outcomes: findings from the Australian national liveability study. Landsc Urban Plan 171:57– 67. https://doi.org/10.1016/j.landurbplan.2017.12.001

Jeffrey, D., Boulangé, C., Giles-Corti, B., Washington, S., and Gunn, L. (2019). Using walkability measures to identify train stations with the potential to become transit oriented developments located in walkable neighbourhoods. *J. Transp. Geogr.* 76, 221–231. doi: 10.1016/j.jtrangeo.2019.03.009

Jomehpour, M. (2015). "Assessing the Livability of the New and Old Parts of Tehran, Municipality Districts 22 and 10 of Tehran." *OIDA International Journal of Sustainable Development* 8 (9): 87–96.

Lowe, M., Arundel, J., Hooper, P., Rozer, J., Higgs, C., Roberts, R., Giles-Corti, B. (2020). Liveability aspirations aspirations and realities: implementation of urban policies designed to create healthy cities in Australia. Soc. Sci. Med. 245. https://doi.org/ 10.1016/j.socscimed.2019.112713.

Paul, A. (2020). "A Critical Review of Liveability Approaches and Their Dimensions." *Geoforum* 117: 90–92. https://doi.org/10.1016/j.geoforum.2020.09.008.

Rachele, J. N., Sugiyama, T., Davies, S., Loh, V. H. Y., Turrell, G., Carver, A., Cerin, E. (2019). Neighbourhood built environment and physical function among mid-to-older aged adults: a systematic review. Health Place 58, 102137. ARTN10213710.1016/j. healthplace.2019.05.015.

Rachele, J. N., Kavanagh, A. M., Badland, H., Giles- Corti, B., Washington, S., & Turrell, G. (2015). Asso- ciations between individual socioeconomic position, neighbourhood disadvantage and transport mode: Baseline results from the HABITAT multilevel study. *Journal of Epidemiology and Community Health*, *69*(12), 1217–1223.

Rachele, J. N., Giles-Corti, B., Turrell, G. (2015). Neighbourhood disadvantage and self-reported type 2 diabetes, heart disease and comorbidity: a cross-sectional multilevel study. Ann Epidemiol. 2016 Feb;26(2):146-150. doi: 10.1016/j.annepidem.2015.11.008. Epub 2015 Dec 12. PMID: 26762963.

Rachele, J. N., Learnihan, V., Badland, H. M., Mavoa, S., Turrell, G., Giles-Corti, B. (2018). Neighbourhood socioeconomic and transport disadvantage: the potential to reduce social inequities in health through transport. Journal of Transport & Health 2017; 7 (Pt B):256-63.

Van Eck, N. J., and Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 2010, 84, 523–538.

Van Eck, N. J., and Waltman, L. (2014) Visualizing bibliometric networks. In *Springer International Publishing, Measuring Scholarly Impact*, 2014, pp. 285–320.

Villanueva, K., Badland, H., Hooper, P., Koohsari, M.J., Mavoa, S., Davern, M., Roberts, R., Goldfeld, S., Giles-Corti, B. (2015). Developing indicators of public open space to promote health and wellbeing in communities. Appl. Geogr. 57 (Suppl. C), 112–119. https://doi.org/10.1016/j.apgeog.2014.12.003.

Zapata-Diomedi, B., Boulangé, C., Giles-Corti, B. (2019) Physical activity-related health and economic benefits of building walkable neighbourhoods: a modelled comparison between brownfield and greenfield developments. *Int J Behav Nutr Phys Act* 16, 11 (2019). https://doi.org/10.1186/s12966-019-0775-8

Zapata-Diomedi, B., Herrera, A. M. M., Veerman, J. L. (2016). The effects of built environment attributes on physical activity-related health and health care costs outcomes in Australia. Heal. Place 2016, 42, 19–29.