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COMMUTING AND WELLBEING: A BIBLIOMETRIC ANALYSIS AND POLICY INSIGHTS

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Abstract. Commuting's impact on wellbeing is a growing focus in urban planning and public policy, reflecting its influence on daily life and health. Despite extensive research, quantitative analysis remains limited. This article conducts a bibliometric review of commuting and wellbeing literature from 1987 to 2024, using Scopus data (N=404). The analysis explores publication trends, key contributors, and thematic areas, identifying the United States, the United Kingdom, Australia, China, and Germany as primary research centers. Prominent journals include Journal of Transport and Health and Transportation Research Part A: Policy and Practice, with institutions such as Utrecht University and the University of Melbourne leading in research on commuting's psychological and socioeconomic effects. Results indicate an increased focus on commuting's health, inequality, and environmental impacts since 2020. It is anticipated future studies will explore technological innovations in commuting and their long-term impacts on diverse social groups, underscoring this field's ongoing evolution.

Keywords: commuting, wellbeing, bibliometric analysis, VosViewer

Аңдатпа. Күнделікті өмір мен денсаулыққа әсерін ескере отырып, Маятниктік көші-қонның әл-ауқатқа тигізетін әсері урбанистика мен қоғамдық саясаттың басты назарында. Зерттеулердің ауқымды болғанына қарамастан, сандық талдау әлі де шектеулі болып отыр. Бұл мақала Scopus деректерін (N=404) пайдалана отырып, 1987-2024 жылдар аралығындағы көлікпен жүру және әл-ауқат тақырыбындағы әдебиеттерге библиометриялық шолу жасайды. Талдау АҚШ, Ұлыбритания, Австралия, Қытай және Германияны негізгі зерттеу орталықтары ретінде көрсете отырып, басылымдардың, негізгі авторлардың және тақырыптық бағыттардың тенденцияларын қамтиды. Journal of Transport and Health, сондай-ақ Transportation Research Part A: Policy and Practice сияқты журналдар беделді басылымдар қатарында, ал Утрехт университеті мен Мельбурн университеті көлікпен жүрудің психологиялық және әлеуметтік-экономикалық әсерлерін зерттеуде көш бастап тұр. Нәтижелер 2020 жылдан бастап денсаулық, теңсіздік және экологиялық әсерлерге қатысты назардың артқанын көрсетеді. Алдағы зерттеулерде көлік жүйесіндегі технологиялық жаңалықтар мен олардың әртүрлі әлеуметтік топтарға ұзақ мерзімді әсерлері қарастырылады деп күтілуде, бұл саланың үнемі дамып отыратынын көрсетеді.

Түйін сөздер: маятниктік көші-қон, әл-ауқат, библиометриялық талдау, VosViewer

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Аннотация. Влияние маятниковой миграции на благополучие становится важным направлением в городском планировании и общественной политике, отражая ее воздействие на повседневную жизнь и здоровье. Несмотря на широкий спектр исследований, количественный анализ остается ограниченным. В данной статье представлен библиометрический обзор литературы о маятниковой миграции и ее влияния на благополучие граждан за период с 1987 по 2024 годы на основе данных Scopus (N=404). Анализ охватывает тенденции публикаций, ключевых авторов и тематические области, выделяя США, Великобританию, Австралию, Китай и Германию как основные центры исследований. Среди ведущих журналов – Journal of Transport and Health и Transportation Research Part A: Policy and Practice, а такие университеты, как Утрехтский университет и Университет Мельбурна, являются лидерами в исследовании психологических и социально-экономических аспектов поездок. Результаты показывают рост интереса к вопросам здоровья, неравенства и экологических воздействий с 2020 года. Ожидается, что будущие исследования будут изучать технологические инновации в сфере транспорта и их долгосрочные последствия для различных социальных групп, что подчеркивает постоянное развитие данной области.

Ключевые слова: поездки на работу, благополучие, библиометрический анализ, VosViewer

Introduction

The association between commuting and well-being has sparked an interest in research within the domain of urban planning and public policy. This relationship is of critical importance within modern society as millions of people from all corners of the planet engage in daily commutes. The emerging number of studies that explore different aspects of commuting such as, but not limited to, the length or the mode of commuting as well as the effects it has physically and psychologically on commuters illustrates the importance of the topic. Recently, studies have focused on different aspects of commuting alongside health such as work or life satisfaction and the impact these behaviors have on an individual's well-being.

“Active commuting,” which describes cycling or walking to work, is considered to significantly increase both physical health and wellbeing [1, 2]. These forms of commute are associated with a healthier lifestyle and mental health. Such evidence underlines the importance of incorporating active travel approaches in urban planning interventions or public health campaigns. On the contrary, longer commutes have been linked to heightened stress and decline of life quality and mental health [3]. Such correlation emphasizes a need for proper and impactful design of transportation infrastructure to reduce the negative consequences of commuting.

The study further illustrates an understanding of the nuances associated with commuting and its impact across particular groups. For example, longer commute times are detrimental to women's

health and wellbeing, particularly within small local labor markets [4]. This gender-specific impact highlights the need for more comprehensive gender sensitive transport policies that consider the varying needs of commuters. Moreover, the role of commuting in enhancing job skills and productivity has been studied, and it has been reported that active commuting in addition to shorter travel distances can lead to improved employee productivity [5].

The greater attention this subject has received has accompanied a growing volume of research which needs a robust bibliometric study to integrate and understand the growth, scope, and focus of this type of scholarly activity. Using the traditional definitions of economic domains as a frame of reference, this research offers a detailed bibliometric analysis of available research on commuting and wellbeing. This research utilized a systematic collection of documents via Scopus database, using keywords related to commuting and wellbeing. This particular strategy resulted in producing a comparatively higher number of documents (N=404) which were all furtherly examined and processed using the VOSviewer program. This analysis facilitated the observation of the key tendencies and patterns in the literature, such as the most representative countries, journals, and institutions which made contributions to this issue, the most popular keywords, and the most often quoted articles. In addition, the study grouped the most influential articles into separate clusters (N=32, 8 clusters) thereby deepening the analysis of thematic concentrations in this area.

The data collection included several steps. The first step encompassed the Scopus database where relevant documents were collected and later checked for relevance and quality. Further step included data visualization and analysis with the help of VOSviewer software. The study contributes to the current literature on commuting and wellbeing by presenting the quantitative analysis of the scholarly works published in Scopus database outlining the most productive countries, institutions, journals, relevant themes, and keywords. This study assists the academic world in providing direction and motivating cross border research on an international scale to further understand the relation between commuting and wellbeing.

This research is arranged as follows: Methodology section describes data collection and analysis process employed for the research. Following part includes results and the discussion section which contains the examination of the geographical and historical developments of commuting and wellbeing research.

Methodology

The present article has undertaken a bibliometric analysis of literature on commuting and wellbeing. It employs a specific methodology using Scopus and VOSviewer software. VOSviewer is a tool designed to create and view bibliometric maps [6]. The software has many functionalities such as co-citation, bibliographic coupling, and co-authorship

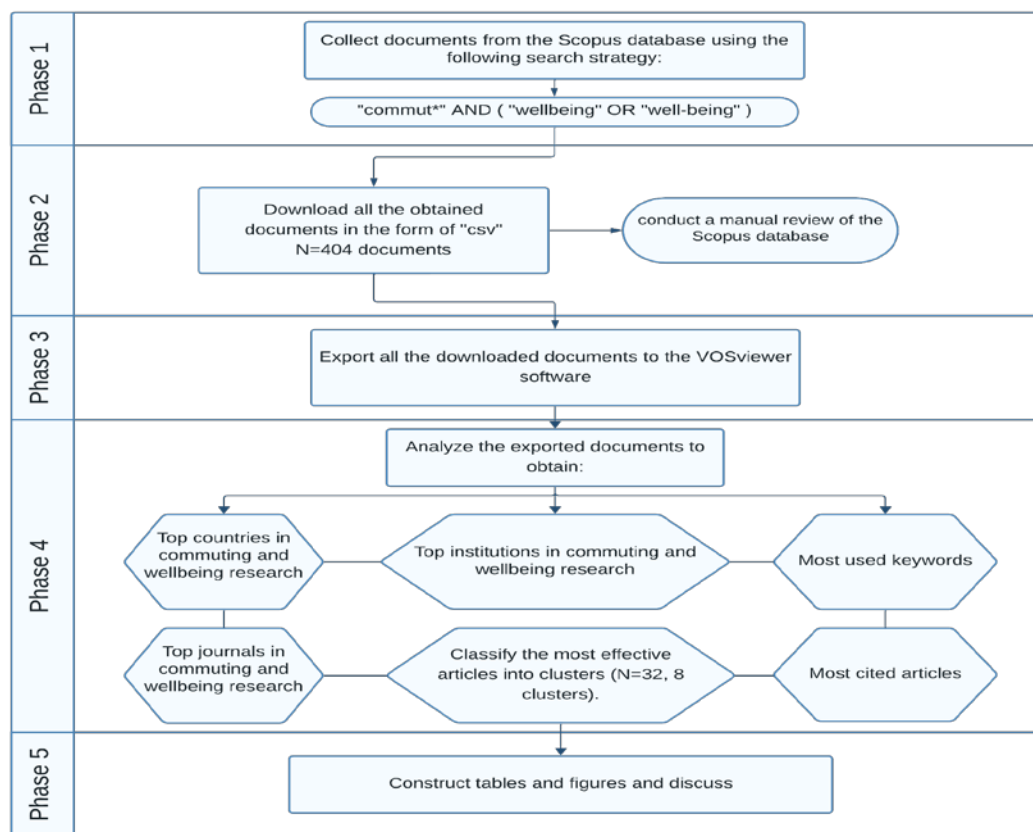
maps, as well as text mining that aid with analyzing large text data [7].

In conducting the bibliometric analysis of research on commuting and wellbeing, the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology was applied. The search for relevant documents was carried out in the Scopus database using specific inclusion criteria. These criteria stipulated that only English-language articles, published (not in-press), and strictly articles (excluding reviews, book chapters, etc.) were to be considered. Following these criteria, a total of 404 documents from the Scopus database were included in the analysis.

As a prominent guideline for systematic review and meta-analysis, the PRISMA methodology promotes guiding principles to conduct and report research activities. In essence, it comprises a set of 27 items and a four-part flow diagram in order to facilitate precise reporting and accounting for the review process and thus improving the standards and flexibility of systematic reviews and bibliometric analyses [8]. This methodological rigor provided by PRISMA is especially useful in urban planning and designing since PRISMA guides in analyzing and developing a robust evidence-based approach by synthesizing the past literature [9].

The study was conducted in five distinct phases to ensure a thorough examination of the research landscape as shown in Figure 1.

Figure 1. Bibliometric review structure methodology chart



Note —Compiled by the authors

The phase one included a keyword data collection from the Scopus database, the keywords which were used include: "commut*" AND ("wellbeing" OR "well-being"). Over 404 relevant documents were sourced from this dataset. The second phase entailed a review of the downloaded documents to ensure their relevance and quality. The third phase included using the VOSviewer software which is specially designed for the bibliometric analysis. Subsequently, in the third phase, the refined dataset was exported to VOSviewer.

The exportation of the documents to VOSviewer followed in the fourth stage of the research's implementation. This analysis provided several important results, in particular, the most prominent countries, journals and institutions in the field of commuting and wellbeing, the most reported keywords, the articles that received the most citations, and the influential articles sorted into clusters. In this area, 32 articles were identified that were sorted into 8 clusters. The final stage

comprised the synthesis of tables and figures and their subsequent deliberation with the aim of providing an accurate appeal of the results.

Results And Discussion

Overview of The Historical and Geographical Trends of Commuting and Wellbeing Research

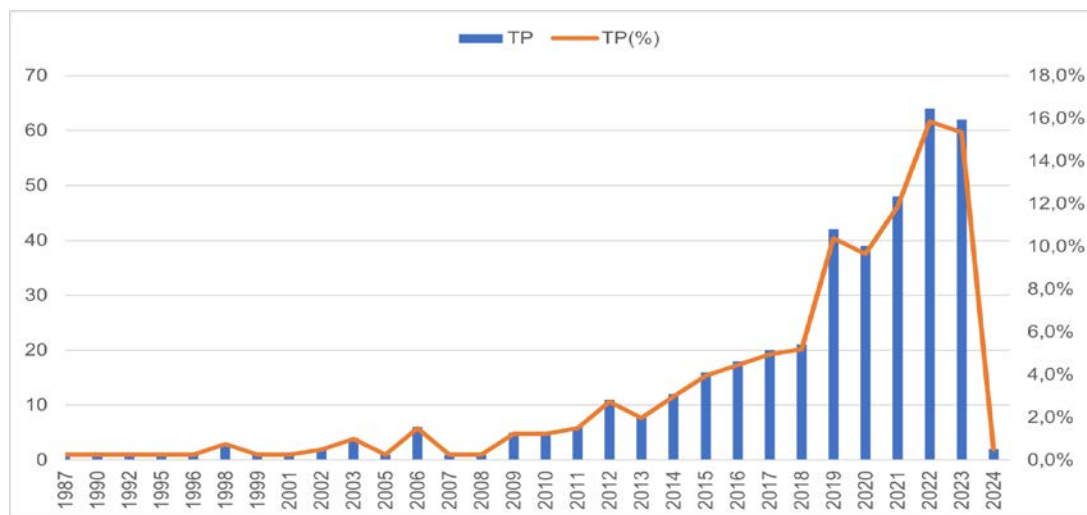
A bibliometric analysis of the literature on commuting and wellbeing spanning from 1987 until January 2024 highlights a considerable development in research productivity. Such publications spanned 404 articles to which the patterns and trends of the publications are remarkable. The account of the annual trends in published documents and their citation between 1987 and 2024 is presented in Figure 2.

There were very few research interests of this nature in the earlier periods. Starting from 2010, it became more noticeable that this trend was caused by the growth of academic research and policy activity in the 2010s and later on, which led to in 2019; there were a total of

42 leads to the publications which accounted for. 10.4% of the total output. This pattern is still evident, with 2022 and 2023 being the most active periods for the publication of articles (64 articles - 15.8% and 62 articles - 15.3% of the total,

respectively). This suggests a growing interest in these themes, which is likely due to changes in urban environments and social efforts to pursue more sustainable commuting options.

Figure 2. Total publication based on Scopus database from 1987 to 2024



Note —Compiled by the authors

Commuting and wellbeing research have a total of 74 countries' contributions to its publications. The United States held its first place with a staggering 24.7% of total publications over the last decade. UK, Australia, China, and Germany published at a rate of 19.3%, 9.1%, 8.9%,

and 8.4%, respectively. Moreover, the US, Canada, Netherlands, Sweden, India and Hong Kong contributed with more than 10 publications each. According to the VOSviewer software and Scopus database, the top ten nations have published a combined total of 95% or more throughout these years.

Table 1. Distribution of Top 10 leading countries from 1987 to 2024 according to VOSviewer

Country	Number of documents	Number of citations	Total link strength
United States	100	3080	318
United Kingdom	78	2259	475
Australia	37	1325	97
China	36	698	217
Germany	34	572	165
Canada	31	735	98
Netherlands	29	1575	285
Sweden	19	850	119
India	12	218	7
Hong Kong	11	116	64

Note – TP; Total publication, TC; Total citation, TLS; Total link strength. Compiled by the authors.

Figure 3 indicates that there is a great attention on commuting and wellbeing research, including the USA, Australia, China, Canada, India and European countries.

Figure 3. Distribution of Top ten leading countries from 1987 to 2024

Note —Compiled by the authors

Key Journals in Commuting and Wellbeing Research

The chosen 404 papers were published in 160 journals indexed in Scopus suggesting a wide distribution of publishing and a wide interest in the research topic of commuting and wellbeing. This section analyzed the 15

journals which published most papers on commuting and wellbeing from 1987 to 2024. A ranking summary of their publications, their citations and their total link strength on commuting and wellbeing is provided in Table 2.

Table 2. Top 15 leading journals in commuting and wellbeing research from 1987 to 2024

Journal	TP	TC	TLS
Journal Of Transport And Health	19	313	51
International Journal Of Environmental Research And Public Health	18	145	13
Travel Behaviour And Society	17	476	71
Sustainability (Switzerland)	14	140	29
Transportation Research Part A: Policy And Practice	13	500	59
Transportation Research Part D: Transport And Environment	12	130	37
Journal Of Transport Geography	11	554	65
Transportation Research Part F: Traffic Psychology And Behaviour	11	259	27
Transportation	10	582	55
Bmc Public Health	6	37	1
Plos One	5	144	0
preventive medicine	5	510	59
transport reviews	5	291	43
transportation research record	5	98	0
cities	4	192	8

Note: TP; Total publication, TC; Total citation, TLS; Total link strength. Compiled by the authors.

In study areas such as commuting and well-being, the figures for the top 15 journals show a particular distribution of publications which speaks volumes about where attention is being paid by scholars. Among the top of the list, the Journal of Transport and Health comes first with its 19 publications which is roughly around 4.70 of the total 404 articles published from the year 1987 to the month of January of 2024. In the same manner, the International Journal of Environmental Research and Public Health comes next with 18 publications that make up for about 4.46 % of the total articles. Travel Behaviour and Society has made his contributions of 17 publications and this is equivalent to 4.21 of the total. With 14 publications (3.47 of total), Sustainability (Switzerland) and Transportation Research Part A: Policy & Practice with 13 publications (3.22 of total) show the growing trend of research on policy as well as sustainable and wellbeing-oriented commuting. By combined contribution of 23 publications, Transportation Research Part D: Transport and Environment, and the Journal of Transport Geography portray the significance of geographic and environmental perspectives in studies on commuting. In addition, with 11 of published papers, Transportation Research Part F: Traffic Psychology and Behaviour contributes by further

investigation into the psychological aspects of commuters underlining the human context of transport research.

Key Institutions in Commuting and Wellbeing Research

Table 3 contains a list of the top fifteen institutional contributors to commuting and wellbeing research from 1987 to 2024, ordered according to the quantity of publications. In first place is the Dutch institution, Universiteit Utrecht, which has the highest volume with 10 publications that correspond to around 2.48% of the total articles. In second place is University College London in the UK with 8 publications that represent roughly 1.98% of the total. This research is indeed very international in scope, as represented by the fact that both The University of Hong Kong and MRC Epidemiology Unit, alongside University of Melbourne, came in next with 7 publications, which marks 1.73% of total each. There are equally 5 contributions from Karlstads Universitet, Chinese University of Hong Kong, Delft University of Technology, Göteborgs Universitet, Universidad de Zaragoza, University of Toronto, The University of Sydney, Umeå Universitet, The University of Western Australia, and Tongji University (1.24% of total each).

Table 3. Top 15 leading institutions in commuting and wellbeing research from 1987 to 2024

Organization	Country	TP
Utrecht University	Netherlands	10
University College London	United Kingdom	8
The University of Hong Kong	Hong Kong	6
MRC Epidemiology Unit	United Kingdom	7
University of Melbourne	Australia	7
Karlstad University	Sweded	5
Chinese University of Hong Kong	Hong Kong	5

Delft University of Technology	Netherlands	5
University of Gothenburg	Sweden	5
University of Zaragoza	Spain	5
University of Toronto	Canada	5
The University of Sydney	Australia	5
Umeå University	Sweden	5
The University of Western Australia	Australia	5
Tongji University	China	5

Note – TP; Total publication. Compiled by the authors.

Keywords' Characteristics

A study of 404 articles produced an average of 4 keywords per article, which amounted to the creation of 1593 keywords. The central thematic concerns are captured by the most popular keywords that are referred to the most, such as: 'commuting' (125), 'human' (117), and 'humans' (98), signifying the emphasis put on the aspect of human behavior in relation to commuting. Other relevant keywords are 'wellbeing' (70), 'transportation' (60), and

even 'mental health' (41), showcasing predominant areas of research.

The keywords 'female' and 'male' also appear 84 times each, hinting towards a gender sensitive orientation in the research. These studies might also be of interest for certain regions as 'China' was mentioned 34 times. The top 20 most commonly found keywords in the articles reviewed are displayed in Figure 4.

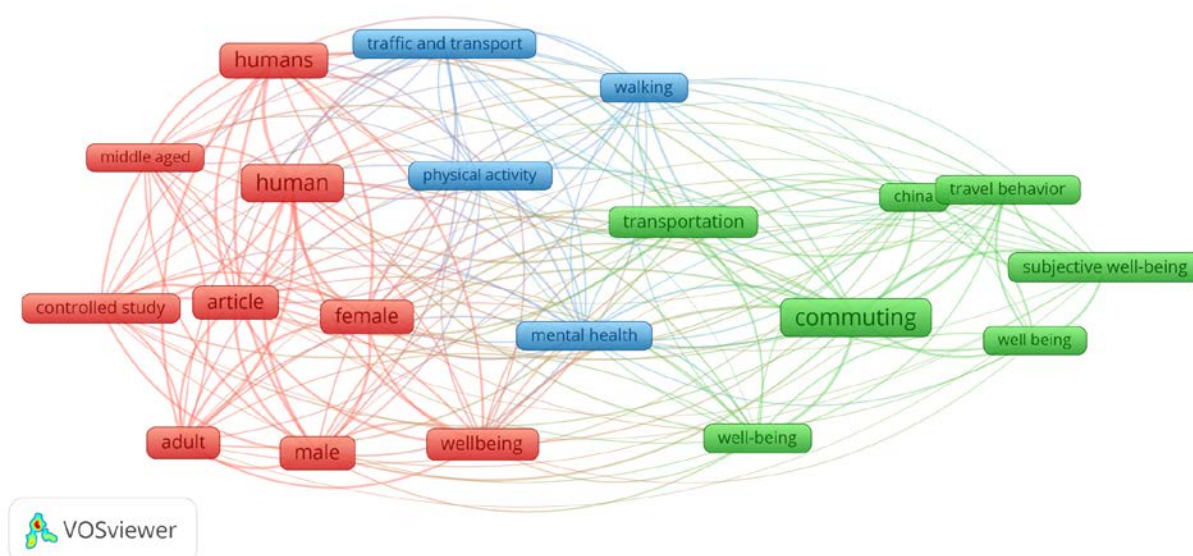


Figure 4. Illustration of top 20 keywords

Note —Compiled by the authors

The VOSviewer visualization integrates inter-related concepts within commuting and wellbeing research that is

divided into three clusters, which are potentially thematic focuses. The red cluster covers mainly the hierarchical and

methodological keywords that include 'humans', 'human', 'female', 'male', 'middle-aged', 'adult', 'article' and 'controlled study'. The demographic descriptors point to an interest in the human factors within the age and gender diversity, as well as 'article' and 'controlled study' pointing to the research design and methodology of the study.

The keywords 'walking', 'physical activity', 'mental health', and 'wellbeing' as contained in the blue cluster are more towards health related and lifestyle correlates of commuting. This means it is a cluster that studies the health and psychological effects of commuting in addition to the possibilities of active travel and its effects on mental and physical health.

Citation Network Analysis

Among the gathered materials, the most important studies exceeding 90 citations were specified and grouped into 8 clusters, as pointed out in Figure 5. These

Green cluster contains key words that seem to pay attention to the social and policy consequences of commuting such as, 'transportation', 'travel behavior', 'China', 'subjective well-being', 'wellbeing', and 'traffic and transport'. It portrays a great deal of emphasis on the broader social sciences and policy factors-oriented research with particular attention, as indicated by 'China', to a geographic area, which implies there is a concentration of studies in that region or with people of Chinese origin.

The connections and overlaps between these groups demonstrate the multidisciplinary nature of the research on commuting and wellbeing because it includes demographic factors, health, and social factors.

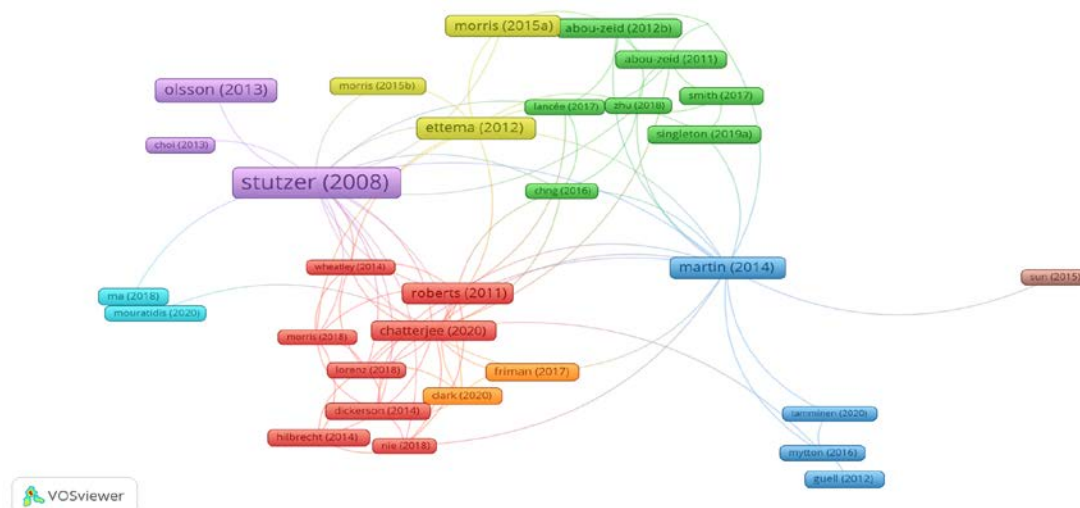
important studies went in upwards of 32 documents and the publications were classified accordingly.

Table 4. Classification of the most significant publications with more than 90 citations based on Scopus database from 1987 to 2024

Cluster	Classification	Color
Cluster 1	Commuting Impact on Psychological Health and Life Satisfaction	Red
Cluster 2	Commuting Experience and Modal Choices	Green
Cluster 3	Active Commuting	Blue
Cluster 4	Emotional Wellbeing	Yellow
Cluster 5	Overall Happiness	Violet
Cluster 6	Urban Living Conditions	Light Blue
Cluster 7	Daily Travel and Wellbeing	Orange
Cluster 8	Commuting to School	Brown

Note —Compiled by the authors.

Figure 5. Illustration of clusters of the publications as the most significant studies with more than ninety citations



Cluster 1: Commuting Impact on Psychological Health and Life Satisfaction.

The analysis of the relationship between commuting and well-being was categorized in Cluster 1 and it dealt with a broad spectrum of associated sources and factors of commuting in which a VOSviewer computerized program was used. This cluster includes topics such as the effects of commute duration on well-being [10, 11], in contrast to the studies which emphasize negative long commuting impacts from research [3, 12]. The cluster also touches both the methodological approaches and the substantive issues in the assessment of the effects of commuting on life satisfaction, including the argument that an ordered fixed-dependent variable approach is preferred for identification purposes [10].

There is a broad appeal to these studies, as they note that improvements in the commuting experience are needed, and so are the details on the commuter's preferences in relation to the urban and transportation design. Policies that do enhance the particular journey are highlighted as policies that should also enhance commuting variation in satisfaction that rises from the changing patterns of commuting [13]. Moreover, gender factors also point out the need for

Note —Compiled by the authors
recognition of the daunting issues women face because of increasing workload at home [14, 15]. Lastly, the trade-offs and

economic compensation of undertaking long commutes are documented as higher wages and homeownership.

Cluster 2. Commuting Experience and Modal Choices.

This cluster addresses the impact of the mode of transport on the individual commuter's self-rated wellbeing (SWB) and their personal level of satisfaction. The research under this cluster focused on the adjusted commuting patterns, the social comparison effects, and their relationships to commuting enjoyment [17, 18, 19]. Results indicate that travel satisfaction is dynamic rather than stable based on the change in commuting practice and one's awareness. Other studies further explore the relationship between neighborhood integration, various commuting patterns, and how each of them impacts commuters' wellbeing [20].

Walking alone increases life satisfaction significantly, above any other form of activity. Improved public transportation connection is linked to lower mental distress; however, this connection is all relative [21]. Furthermore, there is a strong need for particular combinations of commuting duration and mode which can prove more effective, bringing infinite possibilities of wellbeing.

To further explore these topics, research under this cluster delved into how different modes of transportation influence various features of SWB [22, 23]. The findings show that higher levels of wellbeing are maintained by active commuting modalities such as walking and bicycling rather than by motorized transportation. This strongly endorses the fact that diversified and active commuting options need to be enforced by legislation to elevate overall public health and commuter's happiness, emphasizing the importance of taking social & psychological factors into account for the transportation policy.

Cluster 3: Active Commuting.

In Cluster 3, the focus is on active commuting. The research in this cluster primarily highlights the positive effects of active travel and of being physically active on both mental health and wellness. Guell et al. plead for the qualitative angle within social practice theory arguing that decisions on active commuting are deeply rooted in individuals' context and challenging the assumption of purely quantitative models being feasible [24]. Further research provides a strong quantitative basis for linking active commuting to better psychological wellbeing and minimal sickness absence through cycling. Study by Martin et al. (2014) shows that substituting driving with active travel such as walking and taking public transport enhances psychological health [25]. This synergy is reinforced by Mytton et al. (2016) who show that riding a bicycle to work as a normal exercise lowers illness absence days in addition to improving mental health outcomes [2]. Physical activities are positively associated with mental health, hence lowering the prevalence of poor mental health outcomes.

Cluster 4: Emotional Wellbeing.

Commuting affects commuters emotionally, which is what this research focuses on, including the positive and negative implications that different forms of travel, their duration, and a person's personal travel activities inflict on them. Research under this cluster found out that while travelling on public transport, social interactions increase satisfaction. Yet,

activities such as ICED (interpersonal cognitive and emotional dynamics) set pieces can be undertaken to improve satisfaction levels but do not significantly improve one's wellbeing.

Cluster 5: Overall Happiness.

The fifth cluster in VOSviewer classification shows the interactions between commuting behavior and satisfaction by employing the concept of subjective well — being (SWB). If commuting could be made more pleasurable through shorter distances and the inclusion of some form of physical activity such as walking or cycling, the positive effects of such increased self-imposed commuting-stationary work would be beneficial in assisting people in achieving enhanced work-life balance. However, the weight of income or standard of living, or even some other factor, is strong enough to justify the expenditure, only to find out moving burns too much common sense.

Cluster 6: Urban Living Conditions.

The impact of urban living conditions on subjective wellbeing is the focus of cluster 6 as shown by vos viewer clustering. The cluster identifies commute, neighborhood and housing in Oslo as having an indirect and direct relationship with job satisfaction and other life domains.

Studies emphasize the importance of environmental factors such as individual factors as well as the existence of a particular standard of safety as well as housing conditions.

Cluster 7: Daily Travel and Wellbeing.

The VOSviewer classification of Cluster 7 aims to understand how commuting and daily travel relate to subjective well-being (SWB). Greater commute times are associated with lower job and leisure satisfaction and greater stress. In contrast, life satisfaction does not appear to be significantly affected by these factors unless they persist. A notable exception concerns the effects of commuting, which vary with respect to gender, as active commuting such as walking is found to be beneficial to SWB. The results suggest that a careful selection of commute activities can increase well-

being in conjunction with the gains from employing and residing in a particular area.

Cluster 8: Commuting to School.

Cluster 8 focuses on active commuting to school and its possible impacts on both physical and mental health. Active commuters had a significantly lower body mass index (BMI) in comparison, as well as a lower percentage of body fat, waist circumference, and reduced odds of being obese and having depressive symptoms. This underlines the importance of ACS from a physical and mental health perspective and the necessity for policies that foster active transportation among children. Research under this cluster outlines key considerations in implementing WSBs such as logistics, safety, trust, health and wellness,

emotional, and education. It is proposed that addressing these factors may enhance the appeal of WSB and make them a feasible way of promoting healthy active commuting among children.

Most Cited Articles in Commuting and Wellbeing Research from 1987 to 2024

This section offers an analysis of the top 15 most-cited publications on commuting and wellbeing research, spanning the period from 1987 to January 2024, as detailed in Table 5. This review synthesizes studies on the multiple effects of commuting, including psychological wellbeing, economic obstacles, cultural transformations, and environmental concerns.

Table 5. Top 15 most cited publications in commuting and wellbeing research from 1987 to Jan 2024

Publication	Citation
Timperio, A., Ball, K., Salmon, J., Roberts, R., Giles-Corti, B., Simmons, D., Baur, L.A. & Crawford, D., 2006. Personal, family, social, and environmental correlates of active commuting to school. <i>American Journal of Preventive Medicine</i> , 30(1), pp.45–51.	632
Stutzer, A. & Frey, B.S., 2008. Stress that doesn't pay: The commuting paradox. <i>Scandinavian Journal of Economics</i> , 110(2), pp.339–366.	503
Schor, E.L., 2003. Family pediatrics: report of the Task Force on the Family. <i>PubMed</i> , 111(6 Pt 2), pp.1541–1571.	337
Olsson, L.E.T., Ettema, D., Friman, M. & Fujii, S., 2013. Happiness and Satisfaction with Work Commute. <i>Social Indicators Research</i> , 111(1), pp.255–263.	292
Martin, A., Goryakin, Y. & Suhrcke, M., 2014. Does active commuting improve psychological wellbeing? Longitudinal evidence from eighteen waves of the British Household Panel Survey. <i>Preventive Medicine</i> , 55(5), pp.448–453.	248
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Source: Author's own work.

Empirical studies on the active forms of commuting cite the environmental factors and the health benefits associated with such activities for children and adults as vital to the definition of active commuting. Likewise, scholars approach the topic from the opposite end by analyzing the psychology surrounding commuting in addition to its focus on the emotional aspects of riding bicycles and other forms of commuting which aids in improving emotional wellbeing [16]. This change in situation and lifestyle from ordinary commuting to active forms of commuting is believed to alter their overall happiness.

Such commuting activities are also pursued from a psychological and sociological perspective, focusing on family and gender. In this context, studies illustrate that the changes in the family structure in conjunction with the changing responsibilities and duties that a parent has negatively impacts the commuter psychological wellbeing with a caveat that women are the differentiated sufferers because of their changing domestic obligations [14]. It is important to understand the specific changes in the long term as well as in the external context or environment to how something, like attitudes or commuting behavior, is performed. Scholars discuss long term

emotions and how daily commuting and other types of intervention affect happiness and emotional wellbeing [13, 17]. The COVID-19 pandemic illustrates the intensifying effects of global catastrophes on commuting modes and perceptions of transport risk bringing forth new cases of commuting and perception of risk.

Future Trends of Commuting and Wellbeing Research

Research on commuting and well-being is now at the forefront of focus, as evidenced by a notable rise in published work in this area. The Scopus database shows there is a significant increase in publications, suggesting there is more and more attention being paid to this subject within academia. This increase in research output is complemented by an increase in citations, demonstrating that this field's importance is being recognized more widely. From 2019, there has been a significant rise in both the number of publications and their share of the total, showing a growing interest in this study topic, potentially due to increased funding and academic acknowledgment of its relevance. The annual percentage of total publications is increasing, particularly after 2020. There is an increase in the overall percentage contribution of recent articles to the area, which corresponds with

increased academic and potentially policy interest in the effects of commuting on wellbeing. The future areas of research are expected to focus on several uncharted areas that emerge from the bibliometric analysis. Even though there is significant literature on the psychological and physiological aspects of commuting, there are not many integration studies of technologies into commuting practices, the socio-economic effects of commuting, and the effects of commuting patterns on wellbeing over longer time periods.

Conclusion

This research employed a bibliometric approach to gauge the diversity of literature on commuting and wellbeing based on the Scopus database, and subsequently employed VosViewer for data visualization. Overall, 404 documents were reviewed in order to determine the key countries, institutions, and journals that occupy this particular research area. As the outcomes reveal, the major producers are the United States, the United Kingdom, Australia, China and Germany, and as such, there is substantial output in this area. One of the most publishing journals are Journal of Transport and Health, International Journal of Environmental Research and Public Health, Travel Behaviour and Society, Sustainability (Switzerland), and Transportation Research Part A: Policy and Practice. The forefront in this area of research is occupied by Utrecht University, University College London, The University of Hong Kong, MRC Epidemiology Unit, and the University of Melbourne.

The citation network analysis further grouped the 32 articles into 8 clusters based on the effects of psychology and life satisfaction regarding commuting, commuting experiences, and modal choices like active commuting, emotional and overall wellbeing, urban happiness, daily travel and wellbeing, and commuting to school. There was a crossover in evaluation and the top 15 most cited articles on the corpus were evaluated as well.

Based on the bibliometric analysis we highlight several key recommendations

which can be proposed for future research directions and practical implementation in the fields of urban policy and transport planning. First, in light of the growing attention to inequality and the health implications of commuting, it is recommended to empirically study the disparities in commuting experiences and outcomes across different social and demographic groups, including women, older adults, and low-income workers. Such research might inform the development of more inclusive, equitable, and gender-sensitive transport policies. Second, the identified trend toward increasing scholarly focus on “active commuting” highlights the necessity of promoting policies that support active mobility infrastructure. In this context, it is advisable to design and implement urban interventions that enhance the accessibility and safety of pedestrian and cycling networks, particularly in densely populated residential areas. These efforts can serve as effective tools for improving both physical and mental health at the population level. Third, given the rising interest in innovative transport solutions, future research should explore the long-term effects of digitalization, remote work, and smart mobility systems on individual wellbeing. Precisely, it is essential to assess how emerging forms of mobility, such as micromobility and flexible work schedules, affect stress levels, quality of life, and labor productivity. Integrating these dimensions into future scholarly and applied research agendas is crucial for fostering sustainable and human-centered transport development.

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МАЯТНИКТИК КӨШІ-ҚОН ЖӘНЕ ӘЛ-АУҚАТ: БИБЛИОМЕТРИКАЛЫҚ ШОЛУ МЕН САЯСИ ҰСЫНЫСТАР

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МАЯТНИКОВАЯ МИГРАЦИЯ И БЛАГОСТОЯНИЕ: БИБЛИОМЕТРИЧЕСКИЙ АНАЛИЗ И ПОЛИТИЧЕСКИЕ РЕКОМЕНДАЦИИ

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