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Web-Based, Crowdsourced, First-Person Narratives of Young People's Daily Commutes as a New Method for Identifying Situations Impacting Their Subjective Wellbeing

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Abstract
Young people aged 15-24 represent approximately 21% of the global population and increasingly inhabit urban environments. Traditional wellbeing assessment tools typically depend on surveys that use predefined indicators failing to capture emergent, context-specific factors affecting youth navigating complex urban landscapes. This study addresses: How can we identify situations that impact the subjective wellbeing of young city dwellers during their daily commutes? We introduce "Youth-Targeted Mapped Crowd Sourced Storytelling for Wellbeing-Impacting Situation Identification" (YT-MCSST-4WISI), a novel methodology that combines Mapped Crowd-Sourced Storytelling (MCSST) for narrative collection, with a youth-targeted open-call recruitment strategy, and an analysis strategy encompassing thematic, narrative, phenomenological, and phenomenographic analyses with a focus on subjective wellbeing. We piloted YT-MCSST-4WISI via a participatory contest in Envigado, Colombia, engaging 34 ethically recruited participants aged 15-24. Using the open-source Ushahidi platform, participants submitted geotagged narratives describing their commute experiences. Narratives underwent multi-method analysis to identify recurring situations and emotional patterns. Results identified 30 wellbeing-impacting situations mostly overlooked by conventional surveys, including structural issues like steep topography (14.7% prevalence), heat exposure (23.5%), and transit unreliability, plus symbolic moments such as nature as refuge and social affirmations. By merging empathetic storytelling with scalable participatory tools, YT-MCSST-4WISI bridges constructivist and positivist paradigms, offering a scalable framework for youth-centred urban planning and policy, with strong potential for global scalability.

Keywords: youth urban wellbeing, crowdsourced narratives, phenomenology, youth commuting, participatory research, urban empathy, architectural phenomenology

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Introduction

Young people between the ages of 15 and 24 make up a substantial portion of the global population — more than 21% as of 2024 (United Nations, 2024). This life stage is marked by significant cognitive, psychological, physiological, and social transitions, including identity formation, autonomy-building, and increased awareness of their embeddedness in socio-spatial systems (Murphy et al., 2020; Buttazzoni, Doherty & Minaker, 2021). In parallel, urban environments are becoming denser, messier, and more complex, increasingly implicated in the shaping of adolescent and early adult mental health (Collins et al., 2024; Fleckney & Bentley, 2021; Cheung, Fong & Xiang, 2024).

The challenge of supporting youth well-being in cities is both urgent and multifaceted. Conventional urban policy and public health approaches frequently rely on standardized surveys and pre-defined datasets to monitor population well-being. Common tools include the Satisfaction with Life Scale (SWLS) (Diener et al., 1985), the World Health Organization's WHO-5 Well-Being Index (Topp et al., 2015), and the Positive and Negative Affect Schedule (PANAS) (Watson, Clark & Tellegen, 1988). Although these instruments have proven reliable, scalable, and accessible, a growing body of critical literature notes that they often fail to capture contextually embedded, affectively nuanced, and emergent experiential data — especially among youth navigating urban space (Roe & Roe, 2019; Pykett et al., 2022; Bloemsma et al., 2022).

In urban planning and design, these measurement gaps are echoed by critiques of technocratic, top-down decision-making that fails to reflect the everyday experiences of marginalized residents (Buttazzoni & Minaker, 2023; Buchanan, 1992). These critiques raise fundamental questions about whose well-being is measured, where it is located, and how it is defined. Capturing how wellbeing is felt and lived — particularly from the first-person standpoint of young city dwellers — is increasingly seen as a necessary methodological innovation (Coffey, 2020; Courtwright, Makic & Jones, 2020).

In this context, first-person approaches have gained attention. From walking interviews to digital diaries and mobile ethnographies, these methods prioritize lived, emplaced experience over abstract indicators (Fleckney & Bentley, 2021; Voss et al., 2024). Narrative inquiry, in particular, enables researchers to capture how youth craft meaning from the city and orient themselves spatially, emotionally, and symbolically (Coffey, 2020; Pykett et al., 2022). Similarly, qualitative frameworks such as IPA and phenomenography present compelling alternatives to purely statistical monitoring — offering robust idiographic and comparative lenses through which to map youth urban experiences (Smith, Flowers & Larkin, 2009; Marton, 1981).

In this vein, this paper presents an original methodology called Youth-Targeted Mapped Crowd Sourced Story Telling for Wellbeing-Impacting Situation Identification (YT-MCSST-4WISI), a novel approach designed to identify and analyse situations affecting the subjective well-being of young urban commuters. YT-MCSST-4WISI integrates three core components—strategic participant recruitment, geolocated narrative collection, and phenomenological analysis—to capture a large volume of situated first-person accounts. Leveraging digital platforms (in this case Ushahidi), this approach transcends the traditional constraints of phenomenological research, which typically relies on small-sample, interview-based designs, typically ranging between 5 and 25 participants (Moustakas, 1994; Creswell, 2013). Instead, YT-MCSST-4WISI enables the simultaneous

aggregation of dozens to hundreds of geotagged stories, preserving the depth and texture of lived experience while also expanding sample size and geographic scope.

Applied here to the question, "*How can we identify situations that impact the subjective well-being of young city dwellers during their daily commutes?*" the mixed epistemological lineage of this methodology combines the experiential depth of IPA with the categorical synthesis of phenomenography and the scalability of quantitative research making possible to bridge constructivist and positivist paradigms. While grounded in narrative complexity and empathetic interpretation, the use of tags, theme coding, and geospatial data enables pattern recognition and quantification, offering useful insights for urban planning and design interventions.

To pilot the use of YT-MCSST-4WISI in real urban contexts, we launched a participatory storytelling contest in March 2024 entitled "Envigado Narrado." Targeting youth aged 15–24 residing in the Colombian city of Envigado, the project collected a total of 34 valid narratives. These entries were submitted and georeferenced by participants themselves using Ushahidi — an open-source, mobile-compatible crowdsourcing platform often used for crisis mapping and civic reporting.

The written or spoken stories varied substantially in style, focus, and emotional tone, which is precisely what makes the method illuminating. Rather than restrict thematic directions, the contest brief allowed participants to describe any part of their daily commute. Narratives ranged from poetic reflections on nature and peace, to blunt descriptions of harassment, fear, or despair. Together, they form a composite image of youth urban life often invisible to planners, policymakers, or conventional audits.

This paper offers two primary contributions. First, it presents a refined, replicable version of a web-based crowdsourced narrative methodology suitable for scaled identification of everyday situations that impact subjective urban well-being. Second, it showcases an in-depth qualitative and quantitative analysis of 34 youth narratives from Envigado, organized thematically and interpreted through multiple analytical strategies — narrative interpretation, phenomenography, and IPA — and basic quantitative strategies.

The following sections present the theoretical framework underpinning the method, review the relevant literature, describe participant recruitment and data handling in the materials and methods, present and analyse the outcomes in the results, discuss the findings (including lessons for decision makers), offer recommendations for scaling, and conclude with key policy implications and methodological reflections.

Theoretical Framework

Understanding youth's subjective well-being in urban environments requires engaging with the foundational tension between two core epistemological paradigms: positivism and constructivism. Positivism emphasizes detached objectivity, hypothesis-testing, and large-scale quantification. Constructivism, on the other hand, emphasizes the co-construction of reality through perception, meaning, and lived experience (Pykett et al., 2022; Fleckney & Bentley, 2021).

Most well-being assessments — including established scales like the WHO-5, PANAS, and SWLS — fall within a positivist framework (Bloemsma et al., 2022; Diener et al., 1999). These tools assess objective or self-reported psychological markers through predefined

variables. While they offer scale and replicability, they risk overlooking culturally embedded, emotionally nuanced, or narratively grounded dynamics, especially when applied to diverse, underrepresented urban youth populations (Roe & Roe, 2019; Fleckney & Bentley, 2021; Anderson et al., 2024).

By contrast, constructivist approaches — particularly phenomenology and narrative inquiry — investigate subjective well-being as experienced and shaped through lived moments, affective embodiment, and context-specific memory (Coffey, 2020; Pykett et al., 2022). These approaches help reveal the granular interactions between urban form and emotional state, enabling researchers to detect "weak signals" that instrument-based surveys often miss.

Conceptual Foundations of Wellbeing in Urban Youth Research

Contemporary wellbeing research encompasses three fundamental perspectives that inform youth urban wellbeing studies. The eudaimonic perspective, rooted in Aristotelian philosophy, emphasises human potential development, meaning of life, and self-realisation through meaningful experiences (Ryan & Deci, 2001; Steen, 2016). The hedonic perspective, originating from Epicurean thought, focuses on maximising pleasure while minimising pain, examining "what makes experiences and life pleasant and unpleasant" (Kahneman et al., 1999, p. ix; Diener et al., 1999).

Subjective wellbeing (SWB) synthesises these two approaches through cognitive and affective life satisfaction assessments (Diener, 2000; Reddy, 2023). The affective component encompasses positive and negative emotional frequencies, measured via the Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988). The cognitive component evaluates overall life satisfaction, typically assessed through the Satisfaction with Life Scale (SWLS) (Diener et al., 1985; Pavot & Diener, 2008). Essential SWB components include positive affect, domain satisfaction, global life satisfaction, and minimal negative affect (Diener, 2000). The Day Reconstruction Method provides comprehensive SWB measurement through systematic experience sampling (Kahneman et al., 2004).

These wellbeing perspectives underpin the YT-MCSST-4WISI methodology by providing a theoretical lens for interpreting youth narratives, bridging positivist tools like PANAS and SWLS—coding narratives into discrete "situations" and quantifying them (e.g., frequency counts, valence ratings as positive/negative/neutral, and magnitude scales from low to high)—with constructivist phenomenology-based approaches like Interpretative Phenomenological Analysis (IPA) and Phenomenography in the paper's analysis of commuting experiences. This integration highlights how emergent, context-specific factors in urban environments—often overlooked by traditional metrics—can be captured through narrative inquiry, enhancing the study's contributions to youth-centred urban planning.

Interpretative Phenomenological Analysis (IPA)

IPA provides a qualitative framework to examine how individuals make sense of major and minor experiences (Smith, Flowers & Larkin, 2009). Its logic aligns with what Lincoln (1992) calls "sympathetic knowledge": the generation of insight through empathetic interpretation. With its double hermeneutic structure — the researcher interprets the participant's interpretation — IPA allows nuanced navigation between subjective

narratives and analytic categories (Alase, 2017; Biggerstaff & Thompson, 2008; Robinson & Williams, 2024).

In the context of urban youth commuting, IPA proves useful for identifying how individuals interweave external urban stimuli with internal psychological responses. A person experiencing sun glare on a bus may register not only physical discomfort but suppressed anger, symbolic fatigue, or alienation — all valid valences of well-being (Bloemsma et al., 2022; Sokolowski, 2000).

Phenomenography

While IPA explores individual sense-making, phenomenography focuses on categorizing all the qualitatively different ways people experience a particular phenomenon (Marton, 1981). In this case: "How do youth conceptualize the impact of daily commuting on well-being?" Phenomenography enables the grouping of varied interpretations into "outcome spaces," creating conceptual landscapes without flattening narrative nuance (Coffey, 2020; Fleckney & Bentley, 2021).

Studying subjective well-being using both IPA and phenomenography allows researchers to balance depth and breadth: zooming in on unique stories, while also mapping shared affective terrains across a cohort.

Narrative Inquiry and Urban Studies

Narrative inquiry continues to gain ground in wellbeing studies by highlighting that stories are not just descriptive but constitutive — people craft themselves and their lives through narrative (Ricoeur, 1984; Clandinin, 2006; White, 1980; Savin-Baden & Niekerk, 2007). This approach is lauded for its capacity to capture the complexity of lived experience, foster reflexivity, and promote social justice by centering marginalized voices (Caine, Estefan and Clandinin, 2013; Connelly and Clandinin, 2012; Gavidia and Adu, 2022; Mokuria and Chhikara, 2022; McClish-Boyd and Bhattacharya, 2023). In the urban context, youth narratives reveal deeper truths about belonging, routine, resistance, and care within a given spatial configuration.

Pykett et al. (2022) explore narrative's capacity to inform place-making, showing how lived experience — especially among youth — shapes perceptions of comfort, safety, and participation in the city. Building on this, storytelling becomes not merely a research technique but a design lens (Buttazzoni & Minaker, 2023).

Urban Empathy and Design Thinking

Urban empathy extends the concept of individual empathy into planning — asking not only how others feel, but how shared environments make them feel (Steen, 2016; Allio, 2014). Drawing on human-centered design, YT-MCSST-4WISI is embedded within the design thinking tradition, particularly in its iterative, participatory, empathy-driven innovation cycle (IDEO, 2017; Wolniak, 2017).

By inviting narrative participation through a crowd-sourced platform, YT-MCSST-4WISI operationalizes urban empathy in a scalable, replicable framework that aligns with public health, cultural geography, and equity planning.

Literature Review

Evolving Paradigms in Wellbeing Research

Over the past three decades, scholarly approaches to wellbeing have expanded beyond psychology and economics into urban studies, public policy, and youth development (Roe & Roe, 2019; Diener et al., 1999). Traditional models often relied on structured surveys and psychometric indicators—such as the PANAS (Watson, Clark & Tellegen, 1988), Satisfaction with Life Scale (Diener et al., 1985), and WHO-5 (Topp et al., 2015)—to assess subjective wellbeing. While these tools allow for standardization and large-scale comparisons, they are increasingly criticized for their inability to capture lived context and domain-specific variation (Bloemsma et al., 2022; Zhang et al., 2024).

Subjective wellbeing, especially among adolescents, is rarely static and rarely independent of spatial, cultural, and social contexts (Collins et al., 2024; Fleckney & Bentley, 2021). Structured tools often foreground hedonic components (pleasure, pain), eclipsing deeper dimensions of eudaimonic wellbeing—including personal meaning, autonomy, and social belonging (Ryan & Deci, 2001).

This critique has prompted significant interest in mixed-methods strategies and participatory research, particularly within the Global South, where standardized indices may not reflect local realities (Pykett et al., 2022; Buttazzoni, Doherty & Minaker, 2021). Scholars call for new, pluralistic methodologies that respond to contextual, cultural, and experiential nuances in wellbeing (VanderWeele et al., 2020).

Urban Youth, Commuting, and Wellbeing

Studies exploring youth wellbeing in urban settings have begun to emphasize mobility, safety, inclusion, and recognition as key wellbeing dimensions. Youth daily commutes, especially in under-resourced cities, are increasingly seen not merely as logistical tasks but as affectively charged routines involving judgments of safety, cost, identity, and belonging (Chatterjee et al., 2019; Liu, Ettema & Helbich, 2022).

Long commute times correlate strongly with lower wellbeing and increased psychological stress, especially for students and income-insecure youth (Ding et al., 2023; Mytton, Panter & Ogilvie, 2016). Active commuting (e.g. walking, biking) often improves perceived wellbeing only when the landscape is navigable and safe (Friman, Westman & Olsson, 2018; Caamaño-Navarrete et al., 2024). Gendered experiences of commuting—including harassment and threat perception—have been explored in relation to safety design and social inclusion (Gargiulo et al., 2020; Koskela, 1997).

The current research adds to this field by using narrative tools to surface emotional nuances around these experiences that structured questionnaires may overlook.

Phenomenology, Empathy, and Experience-Based Planning

The turn toward phenomenologically informed urban research has generated growing momentum in planning, architecture, and human geography (Ash & Simpson 2016; Del Cerro Santamaría 2018; El Moussaoui 2023; Giese, Bosco e Silva & de Souza Melo 2023; Kenna 2022; Lindon 2019; Nascimento, de Freitas & da Cruz Nascimento 2022; Piga, Rainisio, Stancato & Boffi 2023; Seamon 2023; Shilon 2023). Phenomenology underscores how the world is perceived through lived experience, not neutral observation (Sokolowski 2000; Marton 1981). In cities, this means people's experiences of design

elements—stairs, benches, paths, sound—are emotionally charged, variable, and embodied.

Examples of the application of this approach to study human environment span disciplines, including landscape, public space, architectural and urban design, human geography, and placemaking. Jaakkola (2021; 2022) has advanced phenomenological methods for landscape analysis, highlighting their role in informing green urban planning. Similarly, Pombo et al. (2015) demonstrate how phenomenology enhances architectural and urban design education by fostering awareness of subjective experiences. This is further supported by Kamalipour et al. (2023), who argue that phenomenological research methods provide novel directives for city planning and placemaking, shifting focus toward human-centric urban interventions. In architecture, Seamon (2017) interprets architectural experiences phenomenologically, positioning it as a vital framework for contemporary design research, while Fuentes Farías (2022) integrates phenomenological and hermeneutical traditions to expand interdisciplinary applications in urban and architectural theories. In human geography, phenomenology serves as a cornerstone for understanding place and human-environment interactions, as evidenced by discussions at the 1st Istanbul International Geography Congress (2019). Recent innovations, such as Iwai's (2024) "geo-phenomenology," combine phenomenology with geographic information systems (GIS) to capture lived urban experiences. Yentür (2021) further exemplifies this by examining geography students' perceptions through phenomenological lenses, contributing to pedagogical advancements.

Overall, literature indicates a scholarly consensus on the rising relevance of phenomenological methods across disciplines, marking a paradigm shift from positivist approaches to those prioritizing human perception, experience, and meaning making in urban contexts (Fuentes Farías 2022; Kamalipour et al. 2023; Seamon 2017).

This phenomenological lens aligns with urban empathy, a concept emerging from design thinking and critical spatial theory, which argues that planners must elicit and prioritize affective responses in problem definition (Steen 2016; Coffey 2020). The "voice of experience" becomes expert knowledge grounded in first-hand navigation of complex urban systems (Pykett et al. 2022; Roe & Roe 2019), extending design thinking to prioritize affective responses in planning and bridging phenomenology's focus on perception with participatory tools for experience-based urban interventions.

This coincides with diverse calls—from the World Health Organization's Healthy Cities initiative to UN-Habitat's Urban Equity tools—for more inclusive participation in spatial planning. Cities are increasingly viewed as affective ecologies where architectural and infrastructural conditions provoke, soothe, or constrict lived experience (Bloemsma et al. 2022; Zhang & Liang 2024; Ángel Muñoz et al. 2021).

Narrative, Participant-Driven, and Web-Based Methods

Narrative inquiry continues to gain traction within youth-focused urban research, enabling the modelling of identity, emotional regulation, and spatial engagement through rich, storied accounts (Coffey 2020; White 1980; Savin-Baden & Niekerk 2007). Scholars such as Fleckney and Bentley (2021) argue that urban youth experience space through overlapping themes of conflict, creativity, fear, joy, ambivalence, and aspiration—best accessed through their own subjective vocabularies.

Participatory methods like walking interviews (Hatala et al. 2020), photovoice (Voss et al. 2024), and mobile story-capture (Colla & Kurtz 2024) have become essential for youth-centred wellbeing research. These techniques allow for co-constructed knowledge, where participants frame the meaning and perceived impact of space and systems, aligning with movements in design thinking and deliberative planning that foreground empathy as a condition for inclusive decision-making (Buttazzoni & Minaker 2023; Allio 2014).

Complementing phenomenological foundations, narrative approaches operationalize lived experiences in architecture and urban studies, facilitating empathy and insight into subjective urban realities (Havik 2014; Pykett et al. 2022). Prominent contributions include Klaske Havik's work advancing narrative research while leading the 40-million-euro 'Writing Urban Places' project, funded by the European Union's COST initiative (European Cooperation in Science and Technology 2023). This project examines narrative methods' potential for urban development in medium-sized European cities, as detailed in the comprehensive survey Repository: 49 methods and assignments for writing urban places (Machado e Moura et al. 2023), which outlines 49 global narrative-based methods with theoretical frameworks, bibliographies, and practical exercises. While the term "storytelling" has permeated business and marketing as an outward communication strategy, its phenomenological application in urban studies emphasizes receptive listening to city dwellers' accounts, fostering empathy by simulating lived experiences in the reader's mind (Mar, Oatley & Peterson 2009).

Digital storytelling has opened new possibilities for longitudinal, scalable engagement. Tools like Ushahidi, KoBoToolbox, and StoryMap facilitate spatial data integration and narrative crowd mapping, bridging qualitative content with location-based insights—a critical step for planners and urban epidemiologists (Bloemsma et al. 2022; Pykett et al. 2022).

Wellbeing and "Wicked Problems" in Urban Design

Perhaps the gravest critique of traditional modes of assessing wellbeing through scales and surveys is their failure to illuminate complex, multifactorial, and culturally coded issues. Urban wellbeing, particularly for youth, is often framed as a "wicked problem" (Rittel & Webber, 1973; Buchanan, 1992)—a policy challenge whose causes and solutions are interdependent, contested, and continuously evolving.

Wellbeing is not simply the inverse of illness (Linton, Dieppe & Medina-Lara, 2016) and optimizing it in cities requires responsiveness not just to infrastructure but also to emotion, memory, risk perception, and symbolic expression. Research models like MCSST-4WISI offer a meaningful way to surface these dimensions and translate them into early-stage interventions.

Toward a Multi-Epistemological, Participatory Urban Research

Taking stock of these developments, this study joins a wave of scholarship that seeks to integrate constructivist, idiographic methods with scalable, nimble, participatory tools (Fleckney & Bentley, 2021; Roe & Roe, 2019). The YT-MCSST-4WISI framework offers a bridge between grounded narrative and geospatial mapping, between first-person significance and cross-case comparability.

As Pykett et al. (2022) write, the future of wellbeing research lies in "curating listening infrastructures"—systems designed not merely to collect data but to allow people to

speak in modes they trust. The urban youth, often the most impacted and least consulted demographic, must be brought into the centre of wellbeing frameworks—as narrators, responders, and frontline analysts.

Materials and Methods

This study employs a participatory methodological framework, grounded in the Mapped Crowd Sourced Story Telling (MCSST) methodology, entitled Youth-Targeted Mapped Crowd Sourced Story Telling for Wellbeing-Impacting Situation Identification (YT-MCSST-4WISI). This framework integrates three principal components: (1) an inclusive recruitment strategy, (2) a web-based narrative collection method—namely, the MCSST methodology itself—and (3) a multi-layered qualitative analysis pipeline supported by narrative, phenomenographic, interpretative, and basic quantitative strategies.

Study Setting and Participant Profile

The study was conducted in Envigado, Colombia — a mid-sized urban municipality forming part of the larger metropolitan area of the Aburrá Valley. Though administratively independent, Envigado functions in everyday life as a contiguous extension of Medellín, Colombia's second-largest city (Medellín Como Vamos, 2023). Due to its pedestrian-oriented zones, steep topography, and socioeconomic contrasts, Envigado offers a particularly rich terrain to study youth commuting experiences and subjective wellbeing.

Participants were adolescents and young adults aged 15 to 24, recruited through an open targeted call, communicated via community outreach in schools, skateboarding clubs, religious youth groups, and digital platforms. Ultimately, 34 submissions from individuals across various socioeconomic strata were included (excluding strata 1 and 6), offering a reasonably diverse, although non-representative, sample of city youth.

Participant Recruitment via the "Envigado Narrado" Contest

To attract authentic, voluntary participation, a youth-targeted storytelling contest titled "Envigado Narrado" ("Narrated Envigado") was launched. The contest served both as an incentive and as a recruitment funnel for gathering personal, geolocated commuting experiences.

The contest was publicized primarily via Instagram and WhatsApp using short-form videos, graphic design content, posters, and community influencers. Collaborations with grassroots initiatives including Casa de la Juventud, Tec Débora Arango, and youth-led skate alliances helped to amplify engagement. Participants were invited to submit a personal story — either a 500-word text or a 3-minute audio — describing a common segment of their daily urban commute.

To minimize thematic bias, the public brief avoided terms like "wellbeing," "safety," or "mobility," allowing young people to frame and filter their experiences through their own lenses. The promotion ran between March 4–17, 2024, and the final sample included 31 text-based and 3 audio narratives.

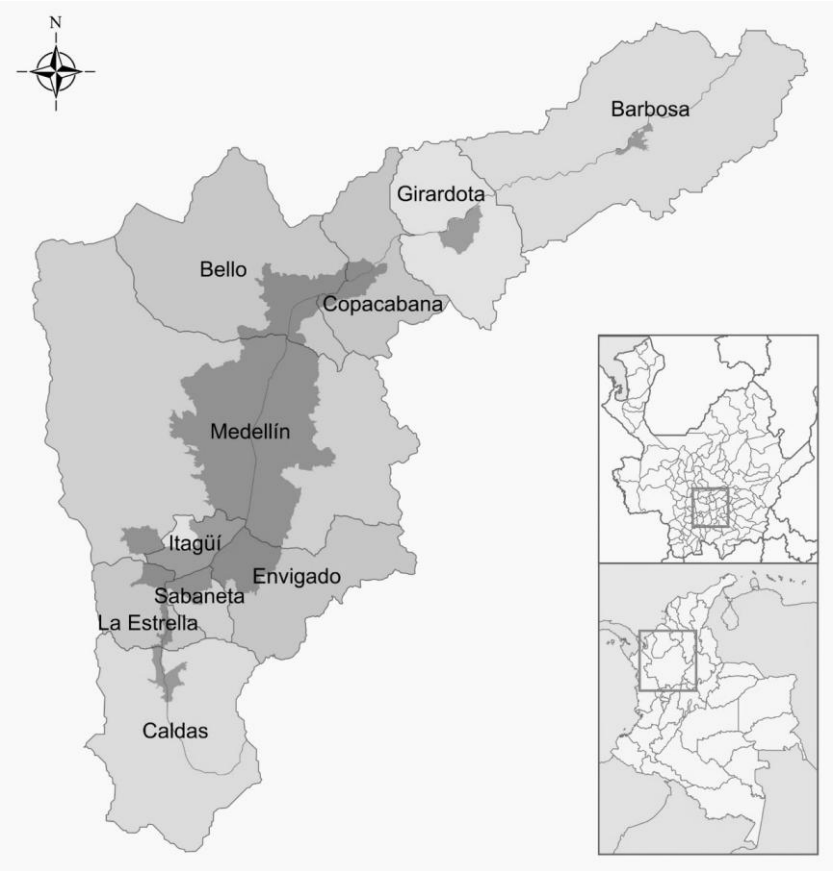

Figure 1. Milenioscuro (Author). December 13, 2014. Mapa del área metropolitana de Medellín (Map). Página oficial del área metropolitana de Valle de Aburrá.
Accessed July 30 2024 from
https://es.wikipedia.org/wiki/Archivo:Mapa_del_área_metropolitana_del_Valle_de_Aburrá.svg

Data Collection: Mapped Crowd Sourced Story Telling (MCSST) Methodology

The collection of submissions was conducted employing the Mapped Crowd Sourced Story Telling (MCSST) methodology. This approach entails the utilization of a crowdsourcing and crowd-mapping platform to gather geolocated first-person narratives of city dwellers' experiences of urban environments. By facilitating large-scale collection of first-person narratives from diverse and numerous city dwellers, this methodology enables a multifaceted understanding of the city from multiple perspectives. Although the MCSST framework can accommodate various media formats—such as graphical or video narratives—in the present study, only text-based narratives were accepted.

The platform used in this research was Ushahidi, a free, cloud-based, and open-source platform originally designed for crisis tracking. Ushahidi permits location-based reporting, multimedia uploads, and customized survey forms (Ushahidi, 2024). A tailored deployment of Ushahidi — envigado-narrado.ushahidi.io — was built for this study, including: a) a submission form (with mapping interface), b) demographic intake questions (age, gender, education, socioeconomic stratum), c) consent and privacy documentation, and d) optional routing to an uploading-powered Google Form for alternate uploads.

Younger participants (under 18) were required by Colombian regulations to submit via parental consent forms. Submissions were accepted in Spanish, and audio files were transcribed manually with the assistance of Microsoft Dictate and image-to-text converters for screenshots.

Figure 2 (left). Screenshot of website for the story telling competition "Envigado Narrado" www.envigadonarrado.com Screenshot taken on 31 July 2025.

Figure 3 (right). Screenshot of Instagram account the story telling competition "Envigado Narrado" @envigadonarrado Screenshot taken on 31 July 2025.

Ethics and Consent

The study complied with S²Cities´s and Colombia's ethics requirements for working with minors and vulnerable youth. Informed consent was secured using standardized digital forms and age-appropriate language. The project design was reviewed by Um-Welt Institute´s ethics committee, and all geographical data and personal information attached to participants names was anonymized or abstracted in post-processing to protect identity.

No physical or psychological harm was recorded during the data collection phase, and participants were notified that their stories could be withdrawn at any time.

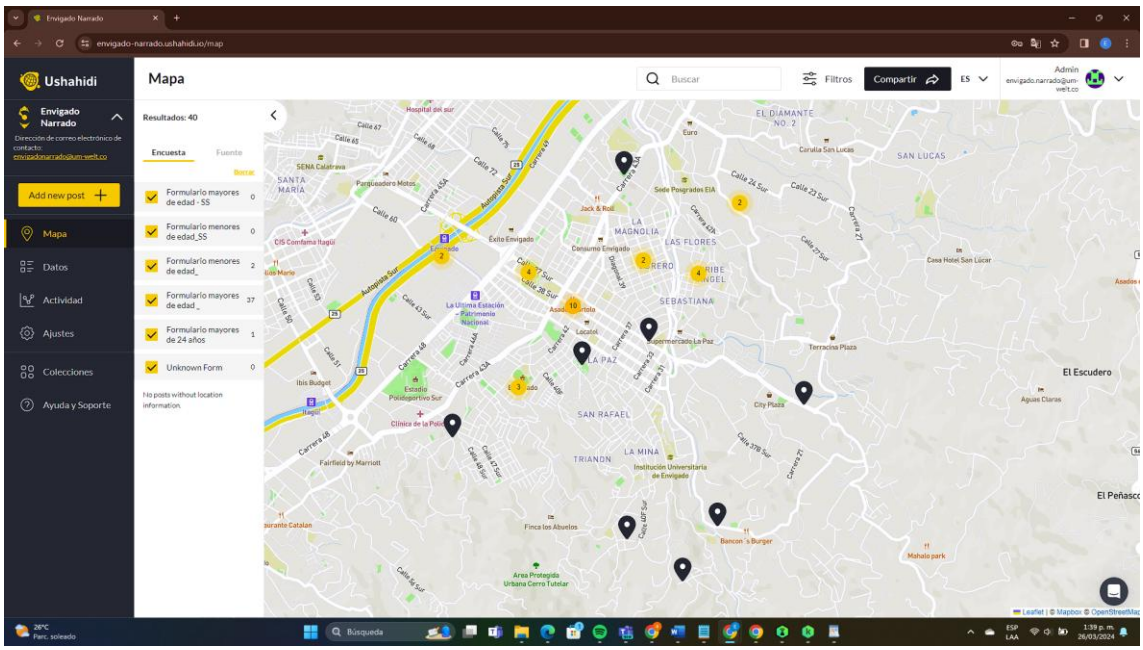

Figure 4. Screenshot of the crowdsourcing and crowdmappting platform used for the project https://envigado-narrado.ushahidi.io/
Screenshot taken on 31 July 2025.

Analytical Strategy

The study used a multi-method strategy across four analysis levels:

Step 1: Situation Identification

Each narrative was coded for discrete "situations" — defined as physical, emotional, or symbolic moments that had a potential impact on the participant's subjective wellbeing. These were tagged using Braun and Clarke's (2006) thematic analysis framework.

Step 2: Situation Characterization and Categorization

Each coded situation was assessed for: Valence (Positive, Negative, or Neutral), Hedonic vs. Eudaimonic impact (Ryan & Deci, 2001), and Emotional Magnitude (Low/Medium/High), based on affective language cues. These variables enabled coding comparisons across themes while preserving individual subjectivity.

Step 3: Theme Construction and Pattern Recognition

Through iterative comparison, situations were grouped into umbrella themes based on recurrence and shared emotional patterns including environmental stressors, safety-related disruptions, aesthetic and symbolic appraisals, positive social micro-interactions, and emotional burdens or coping strategies (e.g. depression, anxiety, routine fatigue)

Phenomenographic thinking enabled mapping out the range of variation in how commuters conceptualized similar settings differently, while IPA enriched the interpretation of particular experiences.

Step 4: Quantitative Synthesis and Visual Outputs

Situations were also counted by frequency and tabulated across participants (N=34). Using Excel, bar charts and matrices were generated to quantify the most frequently mentioned situations, the emotional impact distribution, and the situational clustering per narrative.

This blend of idiographic depth and cross-narrative structure fulfilled YT-MCSST-4WISI's promise to operate at both narrative and systems scales.

Results

Overview of Collected Narratives

A total of 34 young people aged 15–24 participated, producing 31 text narratives and 3 audio submissions. All participants resided within Envigado, though several daily commuted between neighbouring municipalities within the Aburrá Valley. The submissions encompassed a diverse array of socio-economic strata (ranging from 2 to 5), genders, and educational backgrounds; however, the socio-economic strata corresponding to the smallest population percentages (1 and 6, each representing 1% of the population) were not represented.

The primary analysis identified and coded 30 distinct types of "situations" that influence youth subjective well-being. Each situation was assessed based on its recurrence, valence (positive, negative, or neutral), wellbeing impact (hedonic or eudaimonic), and perceived magnitude (rated on a scale from 1 = low to 3 = high). The categorization of valence followed the criteria outlined in the description of "Mean affect by situation" within the Day Reconstruction Method (DRM) (Kahneman et al., 2004). According to Kahneman et al. (2004, p. 1777), positive affect is defined as the average of feelings such as "happy," "warm/friendly," and "enjoying myself," while negative affect is the average of "frustrated/annoyed," "depressed/blue," "hassled/pushed around," "angry/hostile," "worried/anxious," and "criticized/put down."

Most Frequent and Impactful Situations

Table 1 summarizes the most recurring situations and their characteristics:

Code	Situation	% of Narrations	Magnitude	Hedonic / Eudaimonic	Positive / Negative / Neutral
010	Sun exposure (urban heat/discomfort)	23.5	1	H	Pos/Neg/Neu
009	Bus unpredictability	17.6	1	H	Neg
028	Routine/mundane commutes	17.6	1	H/E	Neg

Code	Situation	% of Narrations	Magnitude	Hedonic / Eudaimonic	Positive / Negative / Neutral
003	Steep slopes/topography	14.7	2	H	Neg/Neu
021	Neighbourhood stores/local commerce	14.7	1	H	Neu
015	Nature	14.7	1	H/E	Pos/Neu
022	Considering Envigado beautiful	11.8	1	H/E	Pos
002	Car/traffic noise	8.8	1	H	Neg/Neu
020	Sculptures of Virgin Mary (symbolic)	8.8	1	H/E	Neu
017	Earphones as coping device	20.6	1	H/E	Pos/Neu
001	Women feeling harassment (sexual)	2.9%	3	H/E	Neg
012	Armed attack	5.9%	3	H/E	Neg
013	Short-time kidnapping	2.9%	3	H/E	Neg
...	... (see full Appendix for all 30 cases)	...	...	...	…

The most frequently reported negative situations were environmental in nature, including excessive heat, steep terrain, and unreliable public transportation. In contrast, positive experiences were commonly associated with natural surroundings, brief social interactions, and a sense of neighbourhood pride. Although less frequently reported, the situations perceived as having the greatest emotional impact were those related to safety and harassment, such as short-term kidnapping, armed attacks, and incidents of sexual harassment.

Qualitative Theming and Representative Narratives

(a) Physical Barriers and Urban Ergonomics

Physical topography—especially Envigado's dramatic slopes—is frequently cited as a mobility and motivational barrier, even among able-bodied youth. One participant

described feeling "hesitant to go for a walk" due to "too many hills" and the added burden of intense midday sun (MRO21). These complaints mirror global literature on the structuring effects of "everyday urban ergonomics" (Meeder et al., 2017), where design unintentionally excludes certain groups from active participation in public space.

(b) Temporal Unpredictability and Public Transit

Public transportation's positive reputation in the Aburrá Valley was contradicted by persistent accounts of frustration: "the more hurry I am, the longer it takes" (J3306). Unpredictable bus schedules introduced feelings of instability and loss of agency — echoing emerging research on autonomy, trust, and temporal competence as fundamental wellbeing resources (Tao, Petrović & Van Ham, 2022; Liu, Ettema & Helbich, 2022).

(c) Urban Nature and Sensory Relief

Moments of green—trees, gardens, countryside vistas—were cited as intense affective refuges. Nature-mediated experiences surfaced as both hedonic restoratives and eudaimonic anchors for place-based memories: "the green panorama comforts me," "the land where they used to stand" (J3306, A5873). These findings resonate with international studies on urban green infrastructure as a wellbeing multiplier rather than a passive amenity (Ángel Muñoz et al., 2021; Bloemsma et al., 2022).

(d) Noise, Sensory Management, and Autonomy

Car noise, cited by 8.8% of participants, was described as an "overwhelming metallic rumble" disrupting the "tender morning silence" (Z9315). For a minority, urban sound was reframed as the "personal touch that big cities have," underscoring the subjective and adaptive interpretations possible in loud urban settings. Twenty percent of youth explicitly used earphones to "tune out" undesirable stimuli—an act that, while granting autonomy, might also signal withdrawal from broader civic engagement.

(e) Precarity and Acute Threats

While explicit violence was rare in number, its psychological magnitude was substantial. Reports of "armed attack," "short-time kidnapping," and sexual harassment—though present in only one or two narratives apiece—carried maximum magnitude scores. These narratives reflected not only hedonic distress but a pervasive re-coding of space as hostile, gendered, and unpredictable (Koskela, 1997; Gargiulo et al., 2020).

(f) Routine, Internal States, and Micro-Affirmations

Theme analysis revealed a cluster of narratives describing ennui, loneliness, or depression as mundane realities, typically associated with routinized journeys: "life does not have a single meaning"; "it's only Monday" (J3306). Conversely, micro-affirmations—such as receiving a greeting from strangers or noticing tidy streets—triggered hedonic "spikes" of contentment, confirming the literature on urban empathy and community vitality (Muñoz et al., 2021; Voss et al., 2024).

Cross-Method Integration

Drawing upon IPA, TA, and phenomenography, the study identifies the following as core, interlocking determinants of youth urban wellbeing:

- Physical Navigation and Sensory Appraisal: Not merely functional routes but emotionally coded, spatially diverse realities.
- Temporal and Social Predictability: Regularity and positive micro-social cues buffer against stress, while unpredictability undermines wellbeing.

- Layered Experiences of Threat and Affirmation: Individual cases of acute insecurity (violence/harassment) influence general spatial imaginaries and the likelihood of urban engagement.
- Nature and Symbol: Spiritual, aesthetic, and environmental moments show outsized power as sources of resilience and restorative identity.
- Internal Vulnerability: Emotional and existential burdens (loneliness, anxiety) are tightly bound to both daily routine and the spatial specifics of place.

Quantitative Patterns and Visualizations

The most prevalent situation, "Sun exposure," appeared in 23.5% of accounts, closely followed by bus unpredictability and routine fatigue (each 17.6%), and steep slopes (14.7%). Positive experiences were more often linked to nature or social affirmation, but negative impacts tended to be described as more intense when present—especially gender-based harassment and violent incidents.

A full set of tables and figures (not included here due to format limitations) detail situation frequencies, impact scores, and cross-referenced demographics.
(See Annexes for raw data and all coding results.)

Discussion

The main objective of this study was to explore how urban youth perceive quotidian commuting experiences in relation to their subjective well-being and to evaluate the effectiveness of a novel participatory methodology— Youth-Targeted Mapped Crowd Sourced Story Telling for Wellbeing-Impacting Situation Identification (YT-MCSST-4WISI)— in generating meaningful, empathic, and usable insights. This section synthesizes the multi-method findings, evaluates the contributions of YT-MCSST-4WISI, and aligns the data with theories of urban design, youth mental health, and methodological innovation.

Commuting as Emotional Geography: Beyond Functional Transit

Conventional views of youth mobility often treat commuting as a logistical or efficiency-related topic. However, this study confirms through first-person narratives that commuting is deeply emotional, symbolic, and socially coded (Coffey, 2020; Pykett et al., 2022). The act of moving through the city was described by participants not merely as a functional necessity but as an event marked by situated bodily discomfort, cognitive stress, emotional reflexivity, and aesthetic contemplation.

For example, steep slopes were not only identified as a physical burden but were experienced symbolically as barriers to movement and autonomy. Similarly, routine journeys were described with emotional weight: "It's only Monday," expressed one participant, signifying an existential weariness beyond simple fatigue (J3306). The deeply embedded affective content in these habitual routes reveals how the urban environment exerts cumulative emotional effects on youth (Bloemsma et al., 2022; Voss et al., 2024).

Episodic Violence and Persistent Vulnerability

Though isolated in number, reports of sexual harassment, short-time kidnapping, and armed assault bore disproportionate emotional weight. In the case of participant S1001, the daily act of walking and riding the bus was narrated as a tightly managed vulnerability: a geography of defensiveness shaped by habitual exposure to micro-aggressions and bodily threat. These episodes powerfully demonstrate what feminist urbanists call the "gendered production of fear in everyday mobility" (Koskela, 1997).

Thus, this study reaffirms the need to treat low-frequency but high-impact events not as outliers but as formative to urban experience. This resonates with literature asserting that urban spatial justice requires accounting for asymmetrical affective burdens in design and policy (Gargiulo et al., 2020).

Urban Nature and Emotional Repair

A strong theme across narratives was the function of natural elements — trees, mountain views, and green spaces — in providing emotional grounding, memory triggers, and sensory relief. Many participants described almost ritualistic encounters with greenery as ways to centre themselves, evoke nostalgic calm, or connect spiritually to Envigado.

These findings echo empirical studies from landscape architecture and mental health literatures showing that urban nature boosts both hedonic and eudaimonic well-being, especially among adolescents (Ángel Muñoz et al., 2021; Fleckney & Bentley, 2021). They also support theories of "soft fascination" in Attention Restoration Theory (Kaplan, 1995), where ecological elements facilitate emotional recovery through gentle cognitive engagement. From a planning perspective, this affirms that greenery is not just décor; it constitutes critical affective infrastructure.

Sound, Space, and Sensory Control

While not top-of-mind in most wellbeing assessments, noise emerged as a salient urban stressor. Traffic sounds, described by some as "metallic rumble" and others as "background peace," were coded not just as sensory input but as emotional triggers. The act of wearing headphones was repeatedly cited as both a coping mechanism and space-personalization strategy — a form of psycho-acoustic boundary-making that afforded youth a sense of autonomy. The implications of this are both practical and symbolic. First, it suggests that cities must pay attention to invisible intrusions; second, it reveals how youth actively curate their emotional landscapes through technology and routine — a claim supported in wider research on youth sense-making and digital urban navigation (Buttazzoni & Minaker, 2023; Voss et al., 2024).

Routine and Emotional Deadening

Perhaps one of the more subtle yet powerful themes was the existential disengagement threaded through descriptions of routine. Participants described "autopilot" commutes not only as boring but as alienating — exposing a muted suffering often missed by reactive policy models (Ryan & Deci, 2001). This speaks to a dimension of urban youth experience that blends chronic emotional flattening with low-grade anxiety and social fatigue.

These insights link back to psychological models of well-being that position autonomy, novelty, and purpose as core to flourishing (Deci & Ryan, 2000). Cities must not only

reduce harm but also create conditions where young people feel re-enchanted with urban life.

The Power of First-Person Methods in Wellbeing Studies

Methodologically, the MCSST approach showed strong capacity to reveal information typically absent from structured monitoring tools like PANAS or SWLS. Narrative yielded not just explanatory value but emotional resonance, helping surface "soft data" which conventional surveys are ill-equipped to access (Pykett et al., 2022; Roe & Roe, 2019).

Moreover, while limited in sample size in this study´s pilot application, the method's blend of phenomenological depth, geographic breadth and scalability potential marks it as a viable prototype for scaling in future urban diagnosis.

The Potential of YT-MCSST-4WISI in Urban Wellbeing Studies

The YT-MCSST-4WISI methodology uncovers insights that conventional survey instruments often overlook. For example, a prior investigation into "urban happiness" in the Aburrá Valley (Cardona, Soto & Miranda, 2021)—conducted via 710 questionnaires on quality of life and urban mobility among final-year university students, supplemented by eight interviews with youth organizations and municipal mobility officials—did not identify either the most prevalent nor the most impactful factors affecting young people's wellbeing found in our study. That survey did not mention common stressors such as steep terrain, sun exposure, bus unpredictability, or routine commutes, nor less frequent but deeply distressing incidents like gender-based harassment.

By foregrounding first-person narratives, YT-MCSST-4WISI captures not only explanatory detail but also the emotional resonance of "soft data" that structured tools are ill-equipped to access (Pykett et al., 2022; Roe & Roe, 2019). Although this pilot study involved only 34 participants—nevertheless exceeding the phenomenological guidelines of 5–25 cases for experiential depth (Moustakas, 1994; Creswell, 2013) and achieving the recommended samples of 15–35 to balance depth and breadth (Sim et al., 2018) —its potential for future scalability promises to extend its reach to hundreds or even thousands of contributors, combining rich phenomenological insights with broad geographic scope and representative quantitative data.

Lessons for decision makers

Based on the above findings, it is important that urban researchers, designers, planners, and policy actors institutionalize participatory narrative collection in urban diagnostics, which means that cities should formally recognize narrative methods — including digital storytelling and crowd mapping platforms — as essential complements to more traditional data sources like traffic surveys, crime registries, or wellbeing indices. First-person stories bring emotional depth, local wisdom, and affective insights into early-stage urban design and decision-making; and allows trauma-informed and gender-specific situations to arise and therefore recognize how certain spaces are psychologically off-limits to young women and gender-diverse individuals due to latent threat.

It would also be important that decision makers localize interventions based on experienced geographies of discomfort, because results show that micro-ecologies of discomfort — such as intersections with poor pedestrian visibility, steep slopes or

constant sun—are often ignored in general planning. Cities should layer narrative-based discomfort mapping with GIS assets to better direct budgeted improvements (e.g. shade trees, gradual slopes, safer crossings). Rather than categorizing nature as a cosmetic or recreational amenity, cities must integrate it as a core component of cumulative wellbeing. The affective power of green lanes, shade corridors, and quietly spiritual spaces — like parks or religious sculptures — should be recognized as promoting psychological stability and social healing.

Young people should engage as analysts, not just as informants; they should help to interpret, frame, and apply findings—not solely contribute with data. Training in narrative analysis, participatory GIS, or empathy-based co-design can empower youth networks to co-lead planning at municipal or neighbourhood levels.

Recommendations for scaling

The YT-MCSST-4WISI methodology, leveraging platforms like Ushahidi, excels at collecting large volumes of narratives, though scaling introduces challenges in participant recruitment and analysis. To enhance youth recruitment and attain broader engagement among young individuals, researchers can undertake more robust marketing strategies. Examples include implementing multi-channel, youth-oriented approaches such as TikTok campaigns, Instagram Reels, and WhatsApp groups, while offering compelling incentives like tiered prizes, skill-building workshops, or badges that count toward school credit. Formalizing partnerships with schools, youth clubs, NGOs, and municipal youth offices can tap into existing trust networks, while securing memoranda of understanding with universities can enable peer-to-peer outreach and academic credit opportunities. Additionally, involving local tech hubs and media outlets can amplify visibility and provide in-kind promotional support, creating a more robust ecosystem for engagement.

For analysing large narrative datasets, researchers should maintain a human-centred approach to the initial identification of situations by assigning the first coding pass to trained youth analysts. This strategy preserves narrative nuance and cultivates ownership among participants. The research team can provide these young analysts with rapid onboarding kits that include clear situation-coding rubrics, sample coded stories, and short video tutorials to ensure consistency. After identifying situations, transition to AI-assisted thematic analysis: feed the structured data into natural-language-processing tools to cluster themes, flag sentiment extremes, and surface outliers, while pre-defining analytical lenses such as thematic analysis, IPA, and phenomenography so the AI operates within transparent, theory-aligned boundaries. The youth coding team can then validate machine outputs through spot-checks, iterating until they achieve at least 90% inter-coder agreement.

Finally, the research team can adopt a scalable governance and ethics framework with a tiered data-governance model where community moderators manage narrative integrity, a university or other respected institution's ethics board oversees privacy, and an AI audit team monitors algorithmic bias. Use open-source platforms like Ushahidi with modular plug-ins for consent tracking, age verification, and anonymization at scale. By combining high-touch youth engagement for story gathering with high-tech AI support for pattern detection, YT-MCSST-4WISI can grow from dozens to hundreds or even thousands of narratives without sacrificing depth, inclusivity, or analytic rigor.

Conclusion

Daily commutes are often overlooked in urban wellbeing analysis because they are habitual. But this habitual nature turns them into critical stages for bodily exhaustion, symbolic recognition, psychological harm, and emotional resilience. Commuting is not just about transportation — it is about daily rehearsal for city belonging. This study introduced and piloted the methodology called "Youth-Targeted Mapped Crowd Sourced Story Telling for Wellbeing-Impacting Situation Identification" (YT-MCSST-4WISI) as a tool for identifying real-world situations that impact youth subjective wellbeing in cities. Conducted in Envigado, Colombia, and grounded in phenomenology, the approach leveraged freely accessible digital platforms to collect first-person, geolocated narratives from 34 adolescents and young adults aged 15 to 24. Through detailed thematic, interpretative, and phenomenographic analyses, the study surfaced more than 30 unique types of wellbeing-influencing events that spanned physical, emotional, environmental, and symbolic experiences within daily urban commutes.

Rather than rely solely on conventional wellbeing metrics, this method foregrounds the qualitative texture and narrative shape of youth experience — revealing nuanced emotional states such as fatigue, alienation, micro-joy, transcendent encounters with nature, and the deep scar of spatial insecurity. The findings demonstrate that commuting is not simply a material journey but also a psychological, social, and symbolic process — one that inscribes meaning and emotion onto the city and onto the self. This study confirms that empathy, not just efficiency, must guide future research and design of urban infrastructures. Stories, especially youth stories, offer a unique window into spatial injustice and infrastructural neglect — but they also highlight hope, ingenuity, gratitude, and resilience in the face of structural limitations.

Importantly, many of the youth experiences revealed in this research are not captured by urban audits or standardized wellbeing surveys. Rare acts of harassment or violence, although statistically infrequent, significantly restructure space through fear. Meanwhile, commonplace phenomena like sun exposure, steep terrain, or the absence of shade take on much heavier symbolic weight for day-to-day wellbeing than planners often acknowledge. From a policy standpoint, the YT-MCSST-4WISI model enables a double win: richly situated experiential knowledge and highly scalable emergent data. Its free, digital, cloud-based setup allows for real-time embedding into city diagnostics or participatory planning workshops. More broadly, it brings planning into closer kinship with psychology, narrative inquiry, and design thinking.

The YT-MCSST-4WISI method fills a vital methodological gap by allowing for both narrative empathy and pattern recognition. Its accessibility, adaptability, and replicability make it suitable not only for research but also for applied intersectoral use by city governments, NGOs, design firms, transport agencies, and youth organizations seeking to understand public space as youth actually experience it.

Appendices as Supplementary Files

Appendix 1. Stories (English & Spanish)

Appendix 2. Quotes corresponding to identified situations (English)

Appendix 3. Summarizing table with complete situations (English)

Appendix 4. Participants profile table (English)

Appendix 5. Situation-valence table with specified stories' codes (English)

Declaration of AI-assisted technologies in the writing process

In the preparation of this manuscript, the authors utilized Perplexity Pro for proofreading and both Consensus and Perplexity Pro for assisting in the reference-finding process. After utilizing these tools and services, the authors performed a comprehensive review and applied any necessary amendments to the content, thus taking complete responsibility for the published work.

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