ELSEVIER

Contents lists available at ScienceDirect

Habitat International

journal homepage: www.elsevier.com/locate/habitatint



Check for updates

Striving for wellbeing digitally in the city amidst the pandemic: Solidarity through Twitter in Ankara

Segah Sak*, Bilge Begüm Yavuzyiğit

İ.D. Bilkent University, Department of Architecture, TR-06800, Bilkent, Ankara, Turkey

ARTICLE INFO

Keywords: Wellbeing Pandemic Local government Ankara Social media Cities

ABSTRACT

This article elaborates on the utilization of social media for practices of interaction in the city during the COVID-19 pandemic and discusses its potential in providing for the wellbeing of urban communities. During the early periods of the pandemic when preventative measures were taken intensively to decrease contamination, communities lacked physical relationships with and within cities. Interactions realized in physical spaces in normal conditions were compensated with practices in social media. While such shift can be perceived to have decreased the meaning of cities in the pursuit of daily life and interactions, efforts which were localized upon physical human settlements yet were realized in the digital realm seem to have opened alternative paths for connection among residents. Within this context, we explore Twitter data through three hashtags which were promoted by the local government of Ankara and used densely by the residents in the early periods of the pandemic. Considering that social connection is one of the fundamental enablers of wellbeing, we aim to provide insights into the strive for wellbeing in times of crises where ruptures in physical interaction prevail. The patterns we observe in the expressions that gather around the selected hashtags shed a light on the ways the cities, their people and local governments are positioned in the struggles pursued in digital realm. Our findings support our arguments that social media has significant potential in contributing to the wellbeing of people especially in times of crisis, local governments can increase the quality of life of their citizens with modest actions, and the cities hold significant meanings for people as loci of communities and thus of wellbeing. Through the discussions we pursue, we seek to contribute to the stimulation of research, policies, and community actions that aim at the enhancement of wellbeing of urban individuals and communities.

1. Introduction

COVID-19 caught the public off-guard, if not the experts of health and history. As humanity struggled for survival and health, the pandemic's impact on everyday life has been immense. Governments worldwide have established regulations that restricted the citizens to the boundaries of their homes and virtual interactions, and social distancing has become a motto in spaces of collective living. Consequences are myriad. Not only physical health but also mental health of communities require attention always, but even more importantly, during and after the pandemic (e.g., Cullen et al., 2020; Pfefferbaum & North, 2020; Usher et al., 2020). Quarantine periods have instant or future negative psychological effects due to fear of infection, frustration and boredom, inadequate supplies, and inadequate information (Brooks et al., 2020) while the economic conditions and social interactions are challenged (Douglas et al., 2020). Regarding the fact that urban populations'

vibrant environments have been significantly constrained due to the pandemic, wellbeing of even the luckiest of the urban humankind has been very much at stake. As physical and social environments play a vital role in wellbeing, obliged isolation has called for further efforts to balance the explicit negative impacts of the diminishing of communal spaces and interactions.

While medical services struggled to keep individuals alive, global organizations and governments focused on preventing the spread of the virus. In the meantime, flow of information and support has been facilitated through digital media. The extensive body of research, even prior to the pandemic, reveal the importance of communication management in times of crises (e.g., Eriksson, 2018; Graham et al., 2015; Lachlan et al., 2016; Seeger, 2006). The pandemic has heightened the relevant practices and research with a focus on social media (e.g., Li et al., 2020; Padeiro et al., 2021; Zeemering, 2021), highlighting "the necessity for the development of a comprehensive social media

E-mail addresses: segah@bilkent.edu.tr (S. Sak), begumbilge97@gmail.com (B.B. Yavuzyiğit).

^{*} Corresponding author.

communication strategy to enhance and support crisis" (Mirbabaie et al., 2020, p 195). In this work, alternatively, we adopt a socio-spatial approach and handle crisis communication as a means of creating spatiality and social connectivity in times of physical distancing.

The motivation of the study stems from Ankara, Turkey. Lying in the centre of the country, the city has a rather representative quality among other cities that can be identified as eastern or western. Since Ankara is the capital with over 5.5 million population, it was among the cities where extensive regulations were strictly enforced.2 Towards endeavours to facilitate flow of information and intangible and tangible support, the local government and the residents utilized social media to support peers in a variety of means as well as for the dissemination of the information by articulating certain hashtags and collective actions. Especially until 1 June 2020 when most of the public spaces were opened, and then during the occasional lockdowns enforced until the summer of 2021, social media platforms remained one of the primary spaces of communication and interaction. We limit the timeframe to March-April 2020 considering that in the earlier periods of the pandemic the individuals were rather uninformed and bewildered in their struggles to find ways to sustain their daily practices and so that they used social media more frequently³ in line with the findings of crisis communication research (e.g., Yang, Deng, Zhang, & Mao, 2021).

Residents incarcerated, digital realm has functioned as a projection of the physical settlements accommodating most interactions which are fundamental to being in and being a part of cities and to the wellbeing of communities. With such conceptualization, we investigate data from Twitter, which is one of the most common social media platforms used in times of crises (Bruns, 2012), to understand the interactions localized upon physical human settlements yet realized in the digital realm. Upon three-hundred tweets revolving around three commonly used hashtags promoted by the local government of Ankara, we conduct discourse analysis and content analysis to trace the dispositions and patterns in the statements and associations. While we do not add the data in the discourse and content analyses, we also look into hashtags promoted by the presidency and other local governments of metropolitan provinces and into data regarding other time frames to be able to discuss the analysed data comparatively. Our aim in this work is to provide insights into the ways digital realm, as a projection of cities, provide for the residents during crisis, and elaborate on the position of cities, their people, and local governments in the strive for wellbeing in times of crises where ruptures in physical interaction prevail. We intend to contribute to the literature by building up a conceptual basis that overlaps the topics of social media and wellbeing with a socio-spatial approach and presenting Ankara as a case from a context where socio-political dynamics bear intricacies and the wellbeing levels are quite low compared to the ones around the world (De Neve & Krekel, 2020). Through the discussions we pursue, we seek to contribute to the stimulation of research, policies, and community actions that aim at the enhancement of wellbeing of urban individuals and communities in times and places of crises.

2. Conceptual framework

While the word "wellbeing" is thought to have been used firstly in the 16th Century (Merriam-Webster.com, n.d. b; OED Online, n.d.), the study of the phenomenon has its roots in ancient philosophy. The literature, based on the philosophical traditions, encompasses differing approaches to quality of life and wellbeing: Hedonic approaches perceive wellbeing based on rather emotion-based notions such as happiness or pleasure, and eudaemonic approaches handle it through cognitive and social notions such as functioning, self-realization, or meaning (Adler & Seligman, 2016; Atkinson et al., 2016; Fleury-Bahi et al., 2017; Waterman, 1993). The common thread of contemporary thoughts embraces the complexity of the concept, and thus wellbeing studies are considered and pursued to be interdisciplinary, lying at the intersection of humanities, social sciences, and health sciences. Amidst a global health crisis where circumstances are rigorous, handling wellbeing as "the balance point between an individual's resource pool and the challenges faced" (Dodge et al., 2012, p. 230) seems to be conducive as such approach allows for a rather flexible take on the resources foregrounding the possibilities of striving for being well. In addition to scholarly work, multiple reports that aim policymaking provide frameworks for the study of wellbeing (e.g., GHC, 2019; ONS, 2019; Stiglitz et al., 2009). Ryff and Keyes (1995, p. 176) state that "there is more to being well than feeling happy and satisfied with life". What is more is a matter of opinion. Variations in the conceptualizations bring about heterogeneity in the components which are defined to be constituting the state of wellbeing. Within the wide array of relevant studies, the extensive lists of components of wellbeing reveal clear patterns that manifest the strong impact of one's physical and social environment along with physical health and economic conditions on their wellbeing.

Not only do spaces accommodate the people and thus all the components of wellbeing in interplay, but also, they constitute an important component of wellbeing in that they trigger meanings and attachments (Atkinson et al., 2016). The pandemic and the consequent actions have been an intervention to all such systems of interaction. Many studies have been conducted exploring how cities have been affected by the pandemic (e.g., Mishra et al., 2020), how governments responded to COVID-19 (e.g., Li et al., 2022), and how the implications of the pandemic can improve public health through providing inputs on planning (e.g., Gubić & Wolff, 2022; Mouratidis & Yiannakou, 2022). Especially during the early months, the physical city, with all its flows, encounters, and gatherings, were rendered external to people's everyday life, which was confined to the immediate spaces of the body, work, and the dwelling. There the digital realm played the lead in everyday life to overcome the lack of physical public spaces and of all that they embraced. That is why tracing the indicators of wellbeing or enablers of happy cities - trust, safety and security, affordability, tolerance and inclusivity, health and life balance, sociality, economy, and skills, meaning and belonging (GHC, 2019, p. 114) - within the digital realm is meaningful and even imperative today.

Historically, communities rely on social interactions that are accommodated by the physical places defined by local geographies. The contemporary social terrain, though, comprises "new communities dispersed in space but joined in time" (McQuire, 1997, p. 186). Through global networks, people *spatialize* major social media platforms such as Twitter, Instagram, or Facebook. While the idea proposed by McLuhan (1964) that media is the technological extension of our bodies might have been rather speculative in the 20th Century, considering social media's domination of various systems and our daily lives today, the statement is now quotidian. Individuals do have tools that function as body extensions, which help individuals and communities exceed spatial and temporal boundaries of physical environments. Moreover, within such context, digital realm functions as an extension of the urban environments which are very much dependent on diversity (e.g., Jacobs, 1961) and complex systems of flows (e.g., Castells, 1997).

The pandemic has divulged the transformation in the spatiality of

¹ Turkey is in the 96th line in means of the total number of cases per 100 thousand population, and in the 95th line in means of the total number of deaths per 100 thousand (WHO, 2023).

² Considering the density of the populations, regulations were established and enforced more frequently and strictly in the metropolitan areas throughout the pandemic. These regulations during the data collection period were online education at all levels, the shutdown of all gathering spaces, lockdown for citizens below 20 and above 65, and curfews during the weekends and holidays.

 $^{^3}$ In our explorations regarding the general trends in Twitter, we look at the period between 11 March 2020 (the date of first case) and 1 July 2021 (the date of abandonment of any restrictions). The data gathered through the Postman tool reveals that the number of tweets shared in Turkey in March–May 2020 were the highest in this sixteen-months frame.

everyday life, which, previously, was the subject of much of an intellectual debate rather than of daily conversation. When rapid changes to the pandemic situation and the regulations arose, communities turned to social media for information and to share their knowledge. As social media captures the fleeting communication and information in real time (Dou et al., 2020), it enables rather rapid responses both in its use and research. The extensive, imperative, and interactive use of social media for information sharing and community-making already prompts users to acknowledge or settle for the digital realm as a meaningful *place* where they can interact safely and take collective action. During isolation, overcoming the socio-spatial discontinuities, social media functioned as a space of collective and communal practices. Where people's everyday actions and interactions were limited and bound to strictly defined borders of their immediate spaces, digital space, more than ever, was the public space. Indeed, "we are in this together".

As the much-articulated tagline of the pandemic reveals, community and solidarity are an aspiration in the seek for wellbeing. In times of crisis, people require communities for help and support (Goolsby, 2010). Social media already has a significant role in crises as it enables "citizens' involvement through the provision, seeking and brokering of information, connecting those within and outside the event's geographical space, with implications for both the informal and the formal response effort" (Akhgar et al., 2013, p. 760). During turmoil, utilization of social media platforms becomes an important tool for local governments in effective communication with citizens (Górska et al., 2021; Zhang et al., 2022). Shirky (2011), on the other hand, takes attention to the potential of social media in creating wider, freer, and more democratic actions and reactions, which would otherwise be largely dependent on formal organizations. Especially when particular problems are at play and the formal organizations are inert or inimical, social media platforms, offering the opportunity to exchange information and ideas with the others who share the same experiences, concerns and goals allow collective struggles. Regardless of the conjuncture, given that people are able to access others, the opportunity to participate in conversations potentially enhances awareness of situations as well as of possibilities of collaborative action (Akhgar et al., 2013). As social media inherently serves for access and social networks, it can further be utilized to raise awareness of the others in need, "to mobilize resources and support in the absence of physical contact" (Merchant & Lurie, 2020, p. 2012). Furthermore, taking part in collective acts also raise individuals' awareness of their potential in creating positive influences on the matters that affect the whole community. Sense of belonging to communities and enhanced social bonds guide people towards acting positively during crisis (Alvarez et al., 2017), and this sense of collectivity along with meaningful individual actions increases well-being (Scannell & Gifford, 2017; GHC, 2019; Welby, 2019). Quarantines and lockdowns undoubtedly increased negative emotions; however, interaction helped balance. Narayan (2013, p. 36) explains that "solidarity requires spaces and practices that enable it and nurture it, and social media platforms provide this space while promoting the patterns of interaction that shape our information practices and is easily integrated into one's social fabric". Concordantly, COVID-19 rendered the digital realm the global place of everyday life, of social responses to the crisis, as well as of our struggles for wellbeing.

3. An exploration in Twitter

Wellbeing studies increasingly rely on data gathered from social media as it reveals individual and collective responses to whatever is going on in the environment (Adler & Seligman, 2016). Embracing the digital realm as a resourceful field of study, here, we investigate Twitter for data exploration given that it has widely been used for interaction during the pandemic.

Goolsby (2010) explains that, as Twitter is a highly familiar and selectively transparent tool, it is almost instinctive to turn to it in times of crisis for information gathering and posting. Bruns (2012) also

highlights the popularity of the medium as "an important component of the emergency media-sphere". Hashtags and retweeting make Twitter a favorable medium in means of creating networks, while transparency increases the reliability of actors, networks, and information. It accommodates, similar to the other platforms, regular citizens, activists, non-governmental organizations, institutions, and governments. For various actors of the civil society, it offers the possibility to participate in local situations by reporting and providing updates from within (Bruns, 2012). Consequently, Twitter is considered to be one of the most powerful tools for creation, sustaining and enhancement of information, communication and interactions. Especially during exceptional circumstances, it holds significant potential both for the communities and official bodies in enabling mobility of and access to various resources for wellbeing.

Hashtags, categorizing the contributions of the users under specific keywords, are one of the most operational aspects of social media. As Chris Messina (2007), who came up with the idea behind hashtags, state: "Hashtags become even more useful in a time of crisis or emergency as groups can rally around a common term to facilitate tracking". Therefore, hashtags also function as nodes in flows. Even though Twitter data portrays the network of associations by only a portion of the population, it still helps to have an insight into significant patterns in complex relationships. This is because, on one hand, the population of Twitter users is quite diverse, on the other hand, this network extends beyond the limits of the medium. Digital connectivity affects and transforms the entire society, even the ones that are not connected yet (Tüfekçi, 2017).

In Turkey, just like all around the world, social media plays an extensive role in the lives of individuals, communities as well as civic or official bodies. According to the statistics in January 2023, the total number of active social media users in Turkey was equivalent to 73.1 percent of the total population (Kemp, 2023). Twitter is the third most used social media platform in Turkey following Instagram and What-sApp (Kemp, 2023). As in other places and times of crises, Twitter was used heavily by the public, organizations and institutions in Turkey during especially in the early months of the pandemic.⁴

3.1. Hashtags during the pandemic

During the pandemic, in addition to relevant globally used hashtags such as #stayathome or #weareinthistogether, their translations along with the ones promoted by various governmental/non-governmental bodies were used within national networks. Our study for this work started with a broad exploration of the relevant hashtags. In Turkey, #BirlikteBaşaracağız ("we will succeed together"), #bizbizeyeteriz (we are enough for our own), and #bizbizeyeterizturkiyem (we are enough for our own my Turkey) were the ones used by the presidency. The first two hashtags had been used within the political agenda of the government prior to the pandemic, and #bizbizeyeterizturkiyem, a derivation of the previous one was used as the name and the hashtag of the aid campaign established on 30 March 2020. While all three hashtags were widely used both by the citizens and the ruling party's local governments, due their political implications, opposing individuals, organizations, communities, and local governments abstained from using them and employed alternative ones. For example, the mayor of Istanbul used #birliktebasaracagiz (we will succeed together), and the mayor of İzmir used #bizvariz (we exist), both of which had already been in use in secular cases. The mayor of Bursa, who is a member of the ruling party, on the other hand, used city-based hashtags #bursaicinomuzomuza (shoulder to shoulder for Bursa) and #bursaicincanlabasla (with heart and soul for Bursa) first of which was used during the pandemic specifically. In Ankara, three hashtags were immensely influential: #6MilyonTekYürek, #İyilikDahaBulaşıcı and #VeresiyeDefteri. Within

⁴ For example, in April 2020, the average count of tweets per day was over ninety thousand while it was around sixty-four thousand in December 2021.

March–April 2020, the tweet count of the first hashtag is around sixty-six thousand, while for the others it is around twenty-four thousand. All are promoted by the local government of Ankara, however, not each refer to the city or imply adoption by Ankara residents. Such variety enables us to attain our goals to probe the position of cities, their people, and local governments in the socio-spatiality of the digital realm in relation to wellbeing.

#6MilyonTekYürek translates into "6 million, one heart" and was posed by the local government specific to the locality of Ankara, which has the population around six million. Its focus was the tradesman and workers economically threatened due to the pandemic. The first tweet with this hashtag was from Mansur Yavaş, the mayor of Ankara, who called the citizens into action and invited them to donate. The tweet read: "Over a hundred thousand tradesman and workers had to stop working due to the global pandemic in Ankara. Our municipality is continuing their work on sustaining the daily life. Let us unite to increase the solidarity and overcome the difficulties together". Both the campaign and the hashtag were supported by many citizens, local newspapers, fellow municipalities, and public figures. Through the campaign, more than 15 million Turkish Liras was raised to help the citizens who lost their jobs or needed financial support (Ankara Büyüksehir Belediyesi, 2020). 5

In the following days, citizens from outside Ankara started an unofficial campaign of #Veresiyedefteri. "Veresiye defteri" is a traditional concept in Turkish culture and refers to the notebook kept by local grocery stores (bakkal) for purchases on credit. Within this campaign, philanthropists visited neighbourhood bakkals and paid off fellow citizens' debts. This was a significant and a vernacular favour to many business owners and to those who could not pay their debts. The hashtag was soon appropriated by the mayor to encourage Ankara residents help their peers. He tweeted: "Support grew like an avalanche on this road that we started off by saying goodness is contagious. Our philanthropist citizens paid off the debts of our tradesmen, Ankara experienced the beauty of being united. I would like to express my gratitude to my fellow citizens ..." After the recognition of the hashtag by a large group of Twitter users, the act became a predominant act of solidarity around Turkey. The process proved how "the capacity of social movements to embed themselves in societal and local networks and to gain the support of citizens and of internal adopters ... are crucial to increasing the legitimacy of the advocated practices" (De Andrés et al., 2015).

#İyilikDahaBulaşıcı translates into "goodness is more contagious". Before being converted into a hashtag, it was used as a catchphrase by the local government and the City Council of Ankara to represent the acts of solidarity run by the citizens. One of the first tweets that accelerated use of this hashtag was again from the mayor. The tweet showed pictures of the acts of solidarity done by the residents of Ankara, sharing food and provisions for the ones in need. The tweet read: "When we said goodness was contagious, we were sure that it would spread rapidly all over Ankara. Because people of Ankara know fellowship, sharing, solidarity and love very well. I present my gratitude to all my good-hearted fellow citizens who cannot sleep if their neighbours are hungry." The hashtag was articulated even further being used alongside the #İftarVer

campaign, which was organized by the local government during Ramadan to share food with the people in need.⁷

3.2. Data gathering

Our data gathering process revolves around the three hashtags explained above. The data is extracted from non-private profiles using Twitter API and Postman. For each hashtag, tweets from a random day are gathered initially, and then the tweets from the peak day according to the number of tweets are added. Through data cleaning, the tweets that aim commercial or self-promotion and the ones that contain only the hashtag relevant to that specific dataset are excluded. As our objective is to conduct a qualitative study through a detailed reading of the tweets, we narrow the limits of our data: For each hashtag on each determined day, we include in data the first 50 of top tweets according to the level of interaction determined based the number of likes, quotes, replies and retweets. Hereby, three data sets are formed, and 300 tweets, 100 from each hashtag, are analysed.

The data is first studied through discourse analysis to understand the content and the context of the tweets in relation to wellbeing. With the realization of certain dispositions, which then provides a structure for our coding, content analysis is applied to trace the patterns in the expressions in tweets. In the first step, the tweets are read to pull out frequently appearing words or phrases. We then re-read the datasets to trace further expressions that are less frequent, yet still are relevant to the frequent expressions. Expressions that we put forth are not only words or phrases, but also hashtags or sentences – not necessarily involving the words we use here to represent these expressions. Eventually, we process data of 1143 expressions of which the frequencies are shown in Fig. 1.

Based on this study, we define two levels of categories and code the data accordingly. Table 2 shows the categorization of the expressions while Table 3 shows the count and distribution of expressions among the categories and the datasets. The selected hashtags are excluded as *expressions* in the analysis of their own datasets while included in the other two if they appear along. Coding of the raw data is done manually, yet, during the analysis, SPSS is used for frequencies and crosstabulations. The patterns in expressions and the defined categories provide the opportunity to discuss the role of cities, residents, and local governments in



Fig. 1. Word cloud for the observed expressions in the tweets.

 $^{^{5}}$ The same hashtag was reactivated on 1 April 2021, and again, a considerable amount of aid was provided to the citizens by the citizens through the municipality's mediatorship.

⁶ "The one who sleeps full while their neighbor is hungry is not among us" is a religious saying.

⁷ In Turkey during Ramadan, typically, iftar tents are set up within town squares where people are provided with meals collectively. Under the pandemic conditions, such gatherings were not possible. Yet, "iftar ver" campaign provided the citizens with the opportunity to continue, through the internet, the tradition of sharing food with the people in need. The campaign reached its goal with more than 500 thousand iftars bought by the citizens (Ankara Büyükşehir Belediyesi, 2020).

⁸ For example, we associate #6MilyonTekYürek (6 million, one heart), the hashtag that determines Dataset 1, with *unity* as "one heart" implies *togetherness* and with *Ankara* as "6 million" refers to the population of the city, however, to ensure the expressions are enhanced rather than enforced, we count it as an expression of *unity* or *Ankara* only if it is within Datasets 2 or 3. This is also to say some words, phrases, sentences and hashtags are considered to be expressions of more than one category.

the seek for wellbeing in social media during crisis.

3.3. Findings: Expressions in relation to wellbeing in Twitter

Almost all components of wellbeing including health, relationships, spaces, finances, professional, educational, and social activities, are affected by the pandemic, barely positively. Our discourse analysis reveals the individual and collective efforts to overcome the negative effects of the pandemic, therefore, consciously, or unconsciously, to increase wellbeing. Table 4 provides an overview of the outputs of the content analysis showing the distribution, the total count and the percentage of tweets that involve the defined categories.

Depending on the categories established, we discuss the findings under two subheadings. We firstly look at the data to elaborate on Ankara's and its governance's place in the city-based interaction. Then, we investigate community making and collective actions of support that lead to solidarity. These groups are not exclusive of one another in their impact, yet such structuring enables reflecting significant qualities of the explored interactions that effect the wellbeing of citizens positively. Research analysing social media data bears a significant potential "to trace emotions and well-being of individuals and societies at new scales and resolutions" (Metzler et al., 2022, p. 77). Here, we pull out positive emotions through both discourse analysis, where we look at ways of expression in sentence structures, idioms, emojis or punctuation marks, and content analysis, where we use emotion-dictionary method to determine specific words. To understand the connections between positive emotions and city-based or solidarity-related expressions, we work through cross tabulation in our analysis (Table 5). For the discussions, we also return to the individual tweets that explicitly support the qualitative analysis.

3.3.1. City-based expressions

The tweets involve references to the city in different ways; 61,3% refer to the local government while 19% mention Ankara or the citizens (Table 4). Mansur Yavaş, the mayor, is the most frequent of all expressions (Table 1). Considering that #6MilyonTekYürek already has a reference to Ankara, the first dataset, in fact, has a relationship to the city inherently even though it is excluded from the analysis.

The frequent reference to the mayor and the municipality can be considered as an indicator that the local government was a leading factor in the interaction within the digital space of Twitter. During the pandemic, enabling the continuity of social production and enhancing the citizens' associations to the physical context, the local government had significant contribution to the efforts to maintain wellbeing of its people. Such interaction and communication between the local governments and communities constitute an important field of examination considering both the increasing social media use and its vitality in the post-COVID world (Alam et al., 2022).

What we observe in social media data in the case of Ankara during the pandemic is *governance*, rather than *government*. Governance, Brown (1999, p. 82) explains, is "produced in a variety of different ways and scales, from institutional arrangements, organizational coalitions and community building to the arrangement of people's own lifeworlds and even subjectivities". In line, Zhu et al. (2022, p. 9) state that "the role of city government should not be limited to urban regulators to maintain socioeconomic order; instead, city governments must actively engage in reforms and actions to improve the living standards of urban residents". In relation to the references to the mayor, it is possible to follow the

Table 1
Datasets and their collection dates.

Dataset	Hashtag	Peak day	Random day
D1	#6MilyonTekYürek	29 March 2020	31 March 2020
D2	#VeresiyeDefteri	16 April 2020	15 April 2020
D3	#İyilikDahaBulaşıcı	25 April 2020	4 April 2020

Table 2Categorization of expressions.

Expressions	Category level 1	Category level 2
Mayor municipality	Local Government	CITY
Ankara	Ankara	
Ankara resident		
us	Community	SOLIDARITY
unity		
nation		
public		
solidarity	Cummout	
support goodness	Support	
campaign		
help		
iftar		
charity		
need		
sharing		
satisfaction	POSITIVE E	MOTIONS
hope		
trust		
gratefulness		
admiration		
congratulation		
happiness		

Table 3Distribution and frequency of categorized expressions.

Categories	Count of expressions				
	D1 (#6mty)	D2 (#vd)	D3 (#idb)	Total	
local government	93	70	50	213	
Ankara	21	18	21	60	
CITY	114	88	71	273	
community	97	42	74	213	
support	90	<i>7</i> 8	111	279	
SOLIDARITY	187	120	185	492	
POSITIVE EMOTIONS	123	127	128	378	
	424	335	384	1143	

political support expressed by the citizens. Yavaş, through the relationship he built with the community during the stumps and having defeated the candidate of the ruling party, earned respect of many citizens. Furthermore, depending on the fact that Yavaş comes from a rightist background but currently is a representative of the main leftist opposition party (CHP), we are able to trace an inherently "bipartisan" leadership and a wide array of community support that is deemed to be required for the wellbeing of cities (e.g., Giles-Corti et al., 2016).

During especially in the early months of the pandemic, Yavaş utilized Twitter to promote participation among the community in discussions,

⁹ Here, to explain the context and the collected data, some brief information on the background of Ankara's relationship to its local government would be of help. For more than twenty-three years, metropolitan municipality of the capital was under the administration of the ruling party's representative Melih Gökçek. As stated by Batuman (2013), Gökçek "has constantly clashed with opposition groups (including NGOs, professional organizations, universities and even district municipalities) as well as the administrative courts cancelling his projects, accusing them of acting 'ideologically'" (2013: 589). The results of especially the last two elections where he won were taken with a grain of salt and Gökçek was discredited by citizens for most of the time during his appointment, and eventually by his own party to be forced to resign from his position in 2017. The local government was chaired by a representative from the city council until the next elections. 2019 local government elections were a milestone in the recent political narrative of the country as the major cities were taken over by opposition parties.

S. Sak and B.B. Yavuzyığit Habitat International 137 (2023) 102846

sharing of the local news and communal acts of goodness. The literature already argues that "policies can facilitate the creation of different forms of volunteer organizations and promote information about available opportunities to people" (Adler & Seligman, 2016, p. 15). The mayor's successful management under the crisis of COVID-19 and the various campaigns he established to aid the people of Ankara has provided him with more reach. In multiple platforms, he mentioned that his duty as a mayor was to make every citizen happy that they lived in Ankara, indicating an awareness of community wellbeing.

The data shows that the mayor's efforts are well received by the society. 88% of the tweets that mention the local government also involve expressions of positive emotions (Table 5). Majority of the tweets involve satisfaction and support for the local government while many criticize the previous mayor or the ruling party. For example, one of the tweets say that 'it is unbelievable that a mayor is teaching not only municipalism to the whole country but also crisis management to the state'. Some citizens consider the campaigns started by the local government as acts of reform towards a more socialist governance. The statements that thank the mayor individually or address him sympathetically proves that the mayor is individually praised and internalized. Citizens express trust in Yavas that he will genuinely help the city and its community: 'A leader is not the one who trails the blindfolded crowds but is the one who walks shoulder to shoulder with the acuminous crowds'. The tweets also reveal that the support expressed for the mayor is not necessarily dependent on political dispositions or is from the locals only, but is a consequence of the appreciation of his services by the Turkish public: One of the tweets reads 'Oh Ankara citizens, why have you waited for 25 years for this beautiful man? You have chucked yourselves away ... ' Another highlights the nonpolitical, inclusive nature of the mayor's actions: 'No parties, no politics; there is Ankara residents, there is us, it is us, it is us all. That is why #6milliononeheart'. Such expressions reveal the positive affect of the mayor on the feelings of trust, safety, inclusivity, economical support and community, thus on the wellbeing of citizens during the pandemic. The perceived and acknowledged success of the mayor compared to the ruling party and many local governments also brings about pride and a feeling of privilege for Ankara residents within the national context. Layard (2003) explains that happiness is very much dependent on your 'reference groups'; if you deem yourself to be more fortunate than the 'others' whom you take as a reference for evaluation, you are happier. Hence, the satisfaction of a city's residents with their local government comparing themselves to the rest of the country adds to their quality of

The high frequency of expressions that relate to Ankara and the mayor together reveal the spatiality of the interactions among the citizens. While Twitter provides a digital space for these interactions, it is also possible to sense the citizens' attachment and belonging to their city. Ankara is referred to in 60 tweets where many considers it as the center from which goodness is spreading. Fifty-four of these tweets involve expressions of positive emotions. Digital space, eventually, is not separate from the real world, neither is it a mere replica of it with more speed and reach (Tüfekçi, 2017). The flow of the narrations occupying

Table 4Distribution and frequency of tweets containing defined categories.

Categories	Count of tweets				Percentage
	D1 (#6mty)	D2 (#vd)	D3 (#idb)	Total	
local government	74	65	45	184	61,3%
Ankara	19	18	20	<i>57</i>	19,0%
CITY	77	67	53	197	65,7%
community	<i>57</i>	32	44	133	44,3%
support	61	<i>57</i>	64	182	60,7%
SOLIDARITY	83	66	79	228	76,0%
POSITIVE EMOTIONS	79	77	77	233	77,7%

Table 5Categories and positive emotions cross tabulation.

		POSITIVE EMOTIONS (PE)	
		Count	% within PE
Local government (Lg)	Count	162	69,5%
	% within Lg	88,0%	
Ankara (Ank)	Count	54	23,2%
	% within Ank	94,7%	
CITY	Count	174	74,7%
	% within CITY	88,3%	
Community (Com)	Count	114	48,9%
•	% within Com	85,7%	
Support (Sup)	Count	142	60,9%
== =:	% within Sup	78,0%	
SOLIDARITY (SOL)	Count	182	78,1%
	% within SOL	79,8%	•

the digital space is superimposed onto the experience of the physical space, providing a feedback loop that constantly updates the situation that they emerge from (Mitchell, 2003).

The connections between the physical and digital space are created by the users, and the structured digital space has structuring power on users especially when there is something to be responded to (Tüfekçi, 2017). We observe the intimate relationship between the digital and physical space in the collected data; it is possible to see that being an Ankara resident and having trust in its local government facilitate a collective identity. Acts of solidarity are very much established or strengthened by collective identities (Hunt & Benford, 2004). Since the citizens lacked the experience of their physical public spaces as a result of the pandemic, the highly utilized digital space was perceived as a communal space. Through the interactions related to their localities, citizens engage with their physical environment - even though from outside - cultivating the formation of sense of place and place attachment for both the digital and the physical space. For example, a tweet reads 'here is the Ankara spirit that I have missed.'. As a result of the acts of goodness that the citizens have gathered under, they attach the value of goodness and fellowship to the physical context.

Through collective acts of sharing, both socially and philanthropically, place attachment, therefore meaning and belonging are enhanced. As Scannell and Gifford (2017, p. 254) state, "place attachment, the cognitive-emotional bond that forms between individuals and their important settings, is a common human experience with implications for their wellbeing". Similarly, Atkinson, Fuller and Painter (2016, p. 7) draw attention to the relationship between subjective wellbeing and "what places mean to people and the role of emotional attachments to places". Here, we can speak about two forms of place attachment: to the digital and to the physical. On one hand, we see how Ankara functions as a pivot in the articulation of digital interactions. On the other hand, since the digital medium is accessible and provides access to others in a time where physical contact is avoided, the digital space becomes the object of attachment. In line, the collected data accommodates traces of the overlap between the digital and physical spaces, and we consequently believe that these interactions accommodated within the digital public space have the potential to reflect upon the citizens' relation to their physical and social environments in post-covid times enhancing trust, inclusivity, sociality, meaning and belonging.

3.3.2. Solidarity related expressions

Within the collected data, 44,3% of the tweets involve references to community and 60,7% to support (Table 4). In total, there are 492 expressions of solidarity (Table 3). Building up on the Global Happiness and Wellbeing Policy Report 2019 (GHC, 2019), we can argue that the data involves many expressions that relate to a selection of enablers of "happy cities" including trust, safety, tolerance and inclusivity, sociality, economy, meaning and belonging.

Social media is frequently utilized to enable mobility of resources

and support independent of physical restrictions (Merchant & Lurie, 2020). The tweets that imply such interactions mention expressions such as support, charity, or sharing. While some of the tweets share information on personal or organizational actions, some use the selected hashtags and accompanying statements to call for action. The hashtag #veresiyedefteri is itself a clear call for action which aims to relieve the local grocers (bakkal) as well as the citizens in debt. As stated previously, through #6MilyonTekYürek campaign, many people who have lost their jobs are financially supported by their peers through the municipality's organization. Within Dataset 3, other hashtags such as prosperity) #paylaşmakberekettir (sharing is laşmakmutluluktur (sharing is happiness) are also used. Distribution of resources through acts of support contributes to the peers' household finances and resilience thus to their wellbeing. A sample tweet writes: 'Even if we are in a difficult situation, we cannot remain insensitive to this call. We will do our best together with our tradesmen. This noble nation has overcome the most difficult times throughout history with unity and solidarity and will overcome it again. We will share, we will support ... '. Here, we see resilience, a call for action for support and an emphasis on solidarity.

Seventy-six percent of the tweets refer to solidarity in direct and indirect ways (Table 4). Solidarity contributes to the wellbeing of societies and implies sensitivity towards the wellbeing of others (Fantasia, 1989). It can support a community to recover from unfortunate events, and its effects on wellbeing has the potential to hold over time (Hawdon et al., 2012).

In the collected data, it is visible that the citizens perceive solidarity as a beacon of hope for the days to come and fellow citizens as kind and good: 'You are beautiful when together, my beautiful country @mansuryavas06. ... In Ankara, goodness is spreading faster than the pandemic. ... You can gift an iftar too'. During crises, feeling an attachment to communities empower and encourage people to take meaningful actions to overcome the negative effects of the situation (Alvarez et al., 2017). Such community practices contribute to the collective wellbeing of the citizens by making achievement of collective goals possible (Drury, 2012). The citizens, working towards goals such as gifting dinner to people in need or closing the debts of fellow citizens increase the wellbeing of their community and of their own. The positive impact of volunteer work on the wellbeing of the giver and the receiver is a well-established thought (e.g., Thoits & Hewitt, 2001, p. 116). Both social and supportive interactions that lead to solidarity create meanings in one's own actions, which increases the quality of life even in the hardest circumstances. Through participation in collective actions and practices, the citizens also enhance their attachment to place, reinforcing their belongingness, social capital, and community actions (Manzo & Perkins, 2006; Perkins & Long, 2002). Especially at a time where there is anxiety about the future due to the uncertainties, the simple acts such as of neighbours taking care of each other leads to better wellbeing outcomes (Wiles et al., 2012).

Perceivable effects of these actions almost always bring about positive emotions, and thus, gratitude, which is a component of personal wellbeing (Seligman, 2011). In line, here we see that almost 80% of the tweets that involve expressions of solidarity also express positive emotions (Table 5). Positive emotions in the tweets are manifested through expressions of, for example, satisfaction, hope, trust, or gratefulness, and of acknowledgement of positivity in the acts and results of the campaigns. On one hand, there is gratitude for the mayor's response to the crisis: 'I wholeheartedly congratulate my mayor who have done what the state & the ruling party haven't been able to do ... My mayor who says it is time for solidarity, for unity'. On the other hand, it is possible to observe the gratitude for the actions of the community: 'My eyes brimmed with tears when I saw the photographs (of grocery store owners whose show the records of paid debts). Within this campaign, there is populism, solidarity, friendship, fellowship ... '

Social connection is a key element to live a happy life and being connected to others is related to the wellbeing of individuals and their

social functioning (Berkman & Syme, 1979/2017). Contemporary citizens already have an experience of civic life online, which very commonly handled as a cause of isolation from physical and social environments. Yet, it is also evident that social media provides both social connection and sharing of information for the citizens, especially in times of hardship. Where the physical communal space is not accessible, the digital sphere is utilized further: "As the physical distance from each other increases, finding ways to maintain our social connectedness is critical" (Usher et al., 2020, p. 316). The successful adoption of communication technologies is how the citizens continue to interact with their social environments, where they keep together with fellow citizens while also following the social distancing regulations. Due to spatial discontinuities, there appears a lack of formal structure, and there, technology provides tools for organization (Tüfekçi, 2017) and helps people act together when apart. How citizens participate and experience the civic life influences their wellbeing, and their participation has already been altered by the digital cultures and twenty-first century technologies (Welby, 2019).

3.4. Discussion

Communication and sharing are fundamental to being well and use of hashtags already enable and imply a level of interaction. Having been utilized elaborately, Twitter's potential for contributing to the struggle of maintaining the wellbeing of people was well realized using selected hashtags during the pandemic. The references to Ankara, the local government and the mayor represent the spatiality of interactions. Among the hashtags we study, #6milyontekyurek, which is bound to the city, is the one that is the most articulated. When we look at the hashtags used by the presidency and local governments of İstanbul, İzmir, and Bursa, we observe a similar trend: The hashtags from İzmir and Bursa, identified with the cities, seemed to be more successful considering the proportion of the count of shares and the relevant population. In the study of gathered data, location-based information is omitted to be able to question the position of cities, their people, and local governments in the socio-spatiality of the digital realm in relation to wellbeing. Projection of cities on the digital realm, hereby we argue, highlights the meaning of and attachments to physical human settlements, and creates places independent of physical embodiment, where solidarity can be practiced, and wellbeing can be enhanced.

The findings of the study put an emphasis on the potential and even responsibility of the local governments in enabling the wellbeing of their communities. For community development, there seems to be a need for a structure that is inclusive of various organizations and of diverse groups within the communities, and this structure should be supported rather than controlled by the local governments (Onyx & Leonard, 2010). With rather subtle and costless actions such as articulating inclusive yet city-specific hashtags and expressions, local governments, which already have the power to reach out to existing communities based in their city, can expand the limits of their outreach, and have significant positive impact on people's quality of life. The city-specific hashtags used by the mayors of Ankara and Bursa seem to have a continuity and thus impact even after the pandemic. In such efforts politics play a fundamental role, and especially in geographies of political tension, such as in Turkey, socio-cultural sensitivities and avoidance of partisanship are of high importance. Association of hashtags or expressions in social media with certain ideologies decrease their chances of creating the solidarity and positive emotions as required in emergency situations. Such dispositions elicit political/ideological solidarity, which might still have positive implication, however not a social one that is inclusive. In the findings, praising of the mayor's adoption of socialist, bipartisan approach in Ankara is visible. The mayor Yavaş and the municipality utilized Twitter in such ways that, various acts of kindness and positive emotions were facilitated. Not only many people have received financial support through these organizations, but also many citizens from all around the country seem to have developed or

maintained feelings of trust, safety, inclusivity, and community. We also see reflections of attachment to the city, the local government, and the community. Yavaş has been building an influential Twitter presence both within and outside of the timeframe of the pandemic. During the month of the first case of coronavirus in Turkey, his follower count increased almost by half a million. Currently, 39% of Twitter users in Turkey follow Mansur Yavaş, therefore his tweets transcend the physical boundaries of the city. It is worth to mention here that Yavaş has pursued similar approaches during earthquakes in February 2023 in the south-east of Turkey and has received high levels of endorsement from the public as a potential candidate for presidency for the elections in May, although he eventually was not nominated.

The density of expressions that represent acts of and calls for support along with those that imply community manifests that the social media can indeed contribute to solidarity among people under conditions of crises in line with the literature (e.g., Bruns, 2012; Akhgar et al., 2013; Eriksson, 2018; Górska et al., 2021). Through the acts of solidarity, many citizens, from within the cities and also from the rather underprivileged rural areas in provinces, were supported financially contributing to their wellbeing. Furthermore, as a relief to social distancing, through interaction and pursuit of a sense of unity, city community persevered. The "we are in this together" approach adopted throughout the pandemic portrays use of a together strategy (Górska et al., 2021, p. 5), where, even when facilitated by official bodies, the communication is built around the citizens. All three hashtags used in the data along with the ones used by the central government and other cities embrace such approach highlighting the vitality of social connection and its acknowledgement in enabling wellbeing. Within the data, it is quite easy to follow the positive emotions expressed along with expressions of solidarity; there are clear expressions of gratitude and satisfaction. While this would be expected, the strongest relation of positive emotions being to the mayor (Table 5) in a time of struggle for survival can be interpreted as a phenomenon that is linked to the complex socio-political context of the country and the position of the mayor within its tense structure. We believe that cities from countries which are inherently in turmoil constitute significant cases for the study and understanding of complicated plexus of human settlements, wellbeing and communication.

4. Conclusion

From within a context that bears a multitude of complexities and where the impact of the COVID-19 pandemic on quality of life was severe, in this study, we elaborated on the utilization of social media to compensate for the interactions in the city during the pandemic. Ankara was the epicentrum of our exploration of data, and we focused on the time frame in the first months of the pandemic when almost all businesses were closed, and the majority of the population were in their homes isolated from their everyday spaces in the city and urban communities. Just like all around the world, in Turkey and thus in Ankara, various practices were realized online to pursue everyday life while, consciously or unconsciously, seeking wellbeing. In our research, we explored Twitter data upon which we could track indicators of wellbeing. Our data collection was built upon three hashtags: #6Milyon-TekYürek (6 million, one heart), #İyilikDahaBulaşıcı (goodness is more contagious), and #VeresiyeDefteri (dept book).

Throughout the study, a total of 300 tweets –100 from each hashtag – were qualitatively studied, and the structure of coding to analyse the data was established according to the patterns of expressions observed within the dataset. Relatedly, expressions were categorized on two levels, with main categorization for analysis consisting of expressions of city, solidarity, and positive emotions. Herewith, our conclusion revolves around three main points. Firstly, we, as many others, argue that, if utilized with good intentions and strategies, the digital realm has great potential in contributing to the wellbeing of people. In relation to this argument, we also highlight the importance and responsibilities of local

governments in increasing their communities' quality of life. Towards this endeavour, the municipalities can and should overcome the flaws of the systems within which they have to act. As this study shows, such effort can be shown even without fundamental financial resources. Finally, while we do believe in the power of the digital media and the local governments, we still praise the physical human settlements, whether they be neighbourhoods, towns, or cities, as places that we, the communities, inhabit digitally or physically striving for our being and wellbeing on this earth.

Our findings and conclusions support the existing literature on the significance of use of social media by the public and the local governments in struggling times to provide for the wellbeing of individuals and communities. We believe that the study, focusing on Ankara, contributes to the literature by presenting a multi-layered case and a detailed reading. The findings of the study also suggest that the local governments, institutions, or NGO's can greatly benefit from inclusive yet place and community-based discourse in social media.

The study has limitations arising from its defined scope and intentions as well as the nature of social media and its fleeting conversations. To achieve a focused exploration and conduct a detailed reading of data, only hashtags disseminating from Ankara were studied and a limited number of tweets were included in the dataset. On the other hand, Twitter API only draws data that is publicly accessible at the time of data collection, therefore the sample is bound to the available data, and iterations of data collection always bear inconsistencies.

The complexity of subject matter calls for further studies that draw from a variety of countries and urban, rural, peripheral settlements and deal comparatively with larger sample groups to provide in-depth insights on the plexus of human settlements, wellbeing and social media in times and geographies of crises. Comparative research on social media use in different forms of crises would also benefit the literature. For example, in the writing of this manuscript, Turkey has gone through a multi-layered crisis period after the earthquakes in the south-east of Turkey, and we witnessed multiple forms of response which, we believe, are to be studied in the near future. Our study also points out the extensive and complex dynamics that have impact on the plexus in question. We suggest conduct of further studies regarding wellbeing and social media use in geographies that bear socio-political complications.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Author statements

Segah Sak: Conceptualization, Methodology, Formal Analysis, Investigation, Data Curation, Writing – Original Draft, Writing - Review & Editing, Supervision, Project Administration.

Bilge Begum Yavuzyigit: Conceptualization, Methodology, Investigation, Data Curation, Visualization, Writing - Review & Editing.

Declaration of competing interest

None

References

Adler, A., & Seligman, M. E. P. (2016). Using wellbeing for public policy: Theory, measurement, and recommendations. *International Journal of Wellbeing*, 6(1), 1–35. https://doi.org/10.5502/ijw.v6i1.429

Akhgar, B., Fortune, D., Hayes, R. E., Guerra, B., & Manso, M. (2013). Social media in crisis events: Open networks and collaboration supporting disaster response and recovery. In *IEEE international conference on technologies for homeland security (HST)* (pp. 760–765). Waltham, MA, USA: IEEE. https://doi.org/10.1109/ THS.2013.6699099, 2013. S. Sak and B.B. Yavuzyığit Habitat International 137 (2023) 102846

Alam, A., Meenar, M., Barraza, F., Khalil, M. B., & Knopp, K. (2022). Citizen engagement on local government Facebook pages: Experience from Aotearoa New Zealand. Cities, 123. https://doi.org/10.1016/j.cities.2022.103584. Article 103584.

- Alvarez, L., Borsi, K., & Rodrigues, L. (2017). The role of social network analysis on participation and placemaking. Sustainable Cities and Society, 28, 118–126. https:// doi.org/10.1016/j.scs.2016.06.017
- Ankara Büyükşehir Belediyesi. (2020). Ankara Tek Yürek Kampanyasına Destek Çığ Gibi [support grows like avalanche for Ankara single heart campaign]. Retrieved from htt ps://www.ankara.bel.tr/haberler/ankara-tek-yurek-kampanyasina-destek-cig-gibi/.
- Atkinson, S., Fuller, S., & Painter, J. (2016). Wellbeing and place. In S. Atkinson, S. Fuller, & J. Painter (Eds.), Wellbeing and place (pp. 1–14). Routledge. https://doi. org/10/4324/9781315547534
- Batuman, B. (2013). City profile: Ankara. Cities, 31, 578–590. https://doi.org/10.1016/j.cities.2012.05.016
- Berkman, L. F., & Syme, S. L. (1979/2017). Social networks, host resistance, and mortality: A nine-year follow-up study of alameda county residents. American Journal of Epidemiology, 109(2), 186–204. https://doi.org/10.1093/oxfordjournals. pip. 913/674
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395, 912–920. https://doi.org/10.1016/S0140-6736(20)30460-8
- Brown, M. (1999). Reconceptualizing public and private in urban regime theory: Governance in AIDS politics. *International Journal of Urban and Regional Research*, 23, 45–69. https://doi.org/10.1111/1468-2427.00179
- Bruns, A. (2012). At times of crisis, Twitter shines brightest. *Continuity*, 2012(Q3), 16–17. Retrieved from https://eprints.qut.edu.au/55914/15/Axel_Bruns.pdf.
- Castells, M. (1997). An introduction to the information age. City, 2(7), 6–16. https://doi. org/10.1080/13604819708900050
- Cullen, W., Gulati, G., & Kelly, B. D. (2020). Mental health in the COVID-19 pandemic. QJM: International Journal of Medicine, 113(5), 311–312. https://doi.org/10.1093/ qjmed/hcaa110
- De Andrés, E.Á., Campos, M. J. Z., & Zapata, P. (2015). Stop the evictions! The diffusion of networked social movements and the emergence of a hybrid space: The case of the Spanish Mortgage Victims Group. *Habitat International*, 46, 252–259. https://doi. org/10.1016/j.habitatint.2014.10.002
- De Neve, J.E., & Krekel, C. (2020). Cities and happiness: A global ranking and analysis. In Helliwell, J.F., Layard, R., Sachs, J., & De Neve, J.E. (Eds.), World happiness report 2020 (pp. 46–66). Sustainable Development Solutions Network. Retrived from htt ps://worldhappiness.report/ed/2020/.
- Dodge, R., Daly, A., Huyton, J., & Sanders, L. (2012). The challenge of defining wellbeing. *International Journal of Wellbeing*, 2(3), 222–235. https://doi.org/ 10.5502/jiw.y2i3.4
- Douglas, M., Katikireddi, S. V., Taulbut, M., McKee, M., & McCartney, G. (2020).
 Mitigating the wider health effects of covid-19 pandemic response. *British Medical Journal*, 369. https://doi.org/10.1136/bmj.m1557. Article m1557.
- Dou, M., Gu, Y., & Xu, G. (2020). Social awareness of crisis events: A new perspective from social-physical network. *Cities*, 99, Article 102620. https://doi.org/10.1016/j. cities 2020 102620
- Drury, J. (2012). Collective resilience in mass emergencies and disasters: A social identity model. In J. Jetten, C. Haslam, & S. A. Haslam (Eds.), *The social cure: Identity, health, and well-being* (pp. 195–215). Psychology Press. https://doi.org/10.4324/9780203813195
- Eriksson, M. (2018). Lessons for crisis communication on social media: A systematic review of what research tells the practice. *International Journal of Strategic Communication*, 12(5), 526–551. https://doi.org/10.1080/1553118X.2018.1510405
- Fantasia, R. (1989). Cultures of solidarity: Consciousness, action, and contemporary American workers. University of California Press.
- Fleury-Bahi, G., Pol, E., & Navarro, O. (2017). Introduction: Environmental psychology and quality of life. In G. Fleury-Bahi, E. Pol, & O. Navarro (Eds.), Handbook of environmental psychology and quality of life research (pp. 1–8). Springer International Publishing AG. https://doi.org/10.1007/978-3-319-31416-7.
- GHC (Global Happiness Council). (2019). Global happiness and well-being policy report 2019. Retrieved from https://s3.amazonaws.com/ghwbpr-2019/UAE/GHWPR19.
- Giles-Corti, B., Vernez-Moudon, A., Reis, R., Turrell, G., Dannenberg, A. L., Badland, H., Foster, S., Lowe, M., Sallis, J. F., Stevenson, M., & Owen, N. (2016). City planning and population health: A global challenge. *The Lancet*, 388(10062), 2912–2924. https://doi.org/10.1016/S0140-6736(16)30066-6
- Goolsby, R. (2010). Social media as crisis platform: The future of community maps/crisis maps. ACM Transactions on Intelligent Systems and Technology (TIST), 1(1), 1–11. https://doi.org/10.1145/1858948.1858955
- Górska, A., Dobija, D., Grossi, G., & Staniszewska, Z. (2021). Getting through COVID-19 together: Understanding local governments' social media communication. Cities, 121. https://doi.org/10.1016/j.cities.2021.103453. Article 103453.
- Graham, M. W., Avery, E. J., & Park, S. (2015). The role of social media in local government crisis communications. *Public Relations Review*, 41(3), 386–394. https://doi.org/10.1016/j.pubrev.2015.02.001
- Gubić, I., & Wolff, M. (2022). Use and design of public green spaces in Serbian cities during the COVID-19 pandemic. *Habitat International*, 128. https://doi.org/10.1016/ j.habitatint.2022.102651. Article 102651.
- Hawdon, J., Räsänen, P., Oksanen, A., & Ryan, J. (2012). Social solidarity and wellbeing after critical incidents: Three cases of mass shootings. *Journal of critical incident* analysis, 3(1), 2–25.
- Hunt, S. A., & Benford, R. D. (2004). Collective identity, solidarity, and commitment. In D. A. Snow, S. A. Soule, & H. Kriesi (Eds.), The Blackwell companion to social

movements (pp. 433–457). Blackwell Publishing. https://doi.org/10.1002/9780470999103

- Jacobs, J. (1961). The death and life of great American cities. Vintage Books.
 Kemp, S. (2023). Digital 2023: Turkey. We Are Social & Meltwater. Retrieved from: https://datareportal.com/reports/digital-2023-turkey/. (Accessed 2 April 2023).
- Lachlan, K. A., Spence, P. R., Lin, X., Najarian, K., & Del Greco, M. (2016). Social media and crisis management: CERC, search strategies, and Twitter content. Computers in Human Behavior, 54, 647–652. https://doi.org/10.1016/ji.chb.2015.05.027
- Layard, R. (2003). Has social science a clue?: Income and happiness: Rethinking economic policy. Lecture at the Lionel Robbins Memorial Lecture Series, 3-5 March 2003. London, UK. Retrieved from http://eprints.lse.ac.uk/47425/. London, UK. Retrieved from.
- Li, Y., Chandra, Y., & Kapucu, N. (2020). Crisis coordination and the role of social media in response to COVID-19 in Wuhan, China. *The American Review of Public Administration*, 50(6–7), 698–705. https://doi.org/10.1177/0275074020942105
- Li, X., Hui, E. C., & Shen, J. (2022). Institutional development and the government response to COVID-19 in China. *Habitat International*, 127. https://doi.org/10.1016/ j.habitatint.2022.102629. Article 102629.
- Manzo, L. C., & Perkins, D. D. (2006). Finding common ground: The importance of place attachment to community participation and planning. *Journal of Planning Literature*, 20(4), 335–350. https://doi.org/10.1177/0885412205286160
- McLuhan, M. (1964). Understanding media: The extensions of man. MIT Press, 1994.
 McQuire, S. (1997). Visions of modernity: Representation, memory, time and space in the age of the camera. Sage Publications.
- Merchant, R. M., & Lurie, N. (2020). Social media and emergency preparedness in response to novel coronavirus. JAMA, the Journal of the American Medical Association, 323(20), 2011–2012. https://doi.org/10.1001/jama.2020.4469
- Merriam-Webster.com Dictionary (n.d.,b). Wellbeing. Retrieved from https://www.merriam-webster.com/dictionary/well-being.
- Messina, C. (2007). Twitter hashtags for emergency coordination and disaster relief. Retrieved from https://factoryjoe.com/2007/10/22/twitter-hashtags-for-emergency-coordination-and-disaster-relief/.
- Metzler, H., Pellert, M., & Garcia, D. (2022). Using social media data to capture emotions before and during COVID-19. In J. F. Helliwell, R. Layard, J. D. Sachs, J.-E. De Neve, L. B. Aknin, & S. Wang (Eds.), World happiness report 2022 (pp. 75–104). Sustainable Development Solutions Network.
- Mirbabaie, M., Bunker, D., Stieglitz, S., Marx, J., & Ehnis, C. (2020). Social media in times of crisis: Learning from Hurricane Harvey for the coronavirus disease 2019 pandemic response. *Journal of Information Technology*, 35(3), 195–213. https://doi. org/10.1177/0268396220929258
- Mishra, S. V., Gayen, A., & Haque, S. M. (2020). COVID-19 and urban vulnerability in India. Habitat International, 103. https://doi.org/10.1016/j.habitatint.2020.102230. Article 102230.
- Mitchell, W. C. (2003). Me++: The cyborg self and the networked city. MIT Press.
- Mouratidis, K., & Yiannakou, A. (2022). COVID-19 and urban planning: Built environment, health, and well-being in Greek cities before and during the pandemic. *Cities*, 121. https://doi.org/10.1016/j.cities.2021.103491. Article 103491.
- Narayan, B. (2013). From everyday information behaviors to clickable solidarity in a place called social media. Cosmopolitan Civil Societies: An Interdisciplinary Journal, 5 (3), 32–53. https://doi.org/10.5130/ccs.v5i3.3488
- ONS (Office for National Statistics). (2019). Measuring national well-being in the UK. Retrieved from https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/measuringnationalwellbeing/internationalcomparisons2019.
- Onyx, J., & Leonard, R. (2010). The conversion of social capital into community development: An intervention in Australia's outback. *International Journal of Urban and Regional Research*, 34(2), 381–397. https://doi.org/10.1111/j.1468-2427.2009.00897.x
- Padeiro, M., Bueno-Larraz, B., & Freitas, Â. (2021). Local governments' use of social media during the COVID-19 pandemic: The case of Portugal. Government Information Quarterly, 38(4), Article 101620. https://doi.org/10.1016/j.giq.2021.101620
- Perkins, D. D., & Long, D. A. (2002). Neighborhood sense of community and social capital. In A. T. Fisher, C. C. Sonn, & B. J. Bishop (Eds.), Psychological sense of community (pp. 291–318). Springer. https://doi.org/10.1007/978-1-4615-0719-2
- Pfefferbaum, B., & North, C. S. (2020). Mental health and the covid-19 pandemic. New England Journal of Medicine, 383, 510–512. https://doi.org/10.1056/ NEJMp2008017
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological wellbeing revisited. Journal of Personality and Social Psychology, 69(4), 719–727. https://doi.org/ 10.1037/0022-3314-69.4.719
- Scannell, L., & Gifford, R. (2017). The experienced psychological benefits of place attachment. *Journal of Environmental Psychology*, 51, 256–269. https://doi.org/ 10.1016/j.jenvp.2017.04.001
- Seeger, M. W. (2006). Best practices in crisis communication: An expert panel process. Journal of Applied Communication Research, 34(3), 232–244. https://doi.org/ 10.1080/00909880600769944
- Seligman, M. (2011). Flourish: A visionary new understanding of happiness and well-being. Free Press.
- Shirky, C. (2011). The political power of social media: Technology, the public sphere, and political change. Foreign Affairs, 90(1), 28–41. http://www.jstor.org/stable/25800270
- Stiglitz, J., Sen, A., & Fitoussi, J. (2009). Report by the commission on the measurement of economic performance and social progress. Retrieved from https://ec.europa.eu/eurostat/documents/8131721/8131772/Stiglitz-Sen-Fitoussi-Commission-report.pdf.

- Thoits, P., & Hewitt, L. (2001). Volunteer work and well-being. *Journal of Health and Social Behavior*, 42(2), 115–131. https://doi.org/10.2307/3090173
- Tüfekçi, Z. (2017). Twitter and tear gas: The power and fragility of networked protest. Yale University Press.
- Usher, K., Durkin, J., & Bhullar, N. (2020). The COVID-19 pandemic and mental health impacts. *International Journal of Mental Health Nursing*, 29(3), 315–318. https://doi. org/10.1111/inm.12726
- Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, 64, 678–691. https://doi.org/10.1037/0022-3514.64.4.678
- Welby, B. (2019). The impact of digital government on citizen wellbeing. In OECD working papers on public governance (Vol. 32). Paris: OECD Publishing. https://doi. org/10.1787/24bac82f-en. Retrieved from.
- WHO Latest reported counts of cases and deaths. (2023). Retrieved from https://covid19. who.int/WHO-COVID-19-global-table-data.csv.
- Wiles, J. L., Leibing, A., Guberman, N., Reeve, J., & Allen, R. E. (2012). The meaning of "aging in place" to older people. *The Gerontologist*, 52(3), 357–366. https://doi.org/ 10.1093/geront/gnr098

- Yang, Y., Deng, W., Zhang, Y., & Mao, Z. (2021). Promoting public engagement during the COVID-19 crisis: How effective is the Wuhan local government's information release? *International Journal of Environmental Research and Public Health*, 18, 118. https://doi.org/10.3390/ijerph18010118
- Zeemering, E. S. (2021). Functional fragmentation in city hall and Twitter communication during the COVID-19 pandemic: Evidence from atlanta, san Francisco, and Washington, DC. *Government Information Quarterly, 38*(1), Article 101539. https://doi.org/10.1016/j.giq.2020.101539
- Zhang, W., Yuan, H., Zhu, C., Chen, Q., & Evans, R. (2022). Does citizen engagement with government social media accounts differ during the different stages of public health crises? An empirical examination of the COVID-19 pandemic. Frontiers in Public Health, 10, Article 807459. https://doi.org/10.3389/fpubh.2022.807459
- Zhu, J., Zhu, J., & Guo, Y. (2022). Implications of the COVID-19 pandemic for urban informal housing and planning interventions: Evidence from Singapore. *Habitat International*, 127. https://doi.org/10.1016/j.habitatint.2022.102627. Article 102627.