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Wu, D; Best, LL; Stein, G; Tang, W; Tucker, JD; Healthy Cities Contest Team, (2018) Community participation in a Lancet Healthy Cities in China Commission. *The lancet Planetary health*, 2 (6). e241-e242. ISSN 2542-5196 DOI: [https://doi.org/10.1016/S2542-5196\(18\)30083-4](https://doi.org/10.1016/S2542-5196(18)30083-4)

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DOI: [10.1016/S2542-5196\(18\)30083-4](https://doi.org/10.1016/S2542-5196(18)30083-4)

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Community participation in a Lancet Healthy Cities in China Commission

Community participation is key when setting priorities for healthy cities.¹ Existing literature on community participation in healthy cities is mainly from within Europe and other high-income countries.^{1,2} Strategies for facilitating effective community participation are often scarce in low-income and middle-income countries (LMICs), including in China.³ Although China has made bold commitments to planetary health as shown in its leadership in the Paris Agreements,⁴ there are few examples of community participation in Chinese healthy cities. In response to this gap, we developed a crowdsourcing contest to solicit Chinese citizens' perceptions of healthy cities. Crowdsourcing is the process of having a community solve a problem and then sharing the solutions with the public.⁵ A crowdsourcing contest organises a steering committee, engages citizens to contribute, evaluates contributions, and shares exceptional finalists.⁶

In partnership with *The Lancet* and Tsinghua University,⁷ we did a crowdsourcing contest to obtain images, videos, and concepts of what a healthy city in China consists of (figure). Participant prompts included the following: (1) what does a healthy city look like? (2) how do you build a healthy city? and (3) what contribution have you made to building a healthy city? The call for submissions was distributed through social media, reaching 21 180 individuals in 40 days. 449 entries were submitted. Before judging, all entries were screened for eligibility, and 238 (53%) entries were excluded for the following reasons: not relevant (128, 54%), texts with over 1000 words (35, 15%), poor quality (61, 26%), not original (3, 1%) and repeated submissions (11, 5%). Among all submissions, 211 were

eligible. These submissions included 112 text concepts, 90 images, and nine videos. All entries were judged on a scale from 0 to 10 by at least three individuals. Overall, 59 entries were deemed exceptional and recognised by the Lancet Healthy Cities Commission. These texts, images, and videos were celebrated and announced to the public on World Population Day in 2017. Additionally, we created open access webpages on Wikipedia and SESH Global to download and view these entries.

The appendix (p 1) shows a map of the distribution of the 211 submissions from 29 provinces. There were more female (120, 57%) than male participants (91, 43%). The appendix (p 2) shows the judges' mean scores distribution by text, image, and video submissions respectively. The text submission scores ranged from 3.2 to 8.8 with a mean of 5.9 (SD 1.11). The image submission scores ranged from 3.8 to 8.5 with a mean of 6.0 (SD 0.99). The video submission scores ranged from 5.0 to 7.0 with a mean of 6.1 (SD 0.65). We examined the differences in mean scores for submissions by participants with or without expertise in design, public health, or urban planning. Mean scores of submissions from non-experts did not differ significantly from those of entries submitted by individuals with relevant expertise (5.9 vs 6.2, $p=0.12$).

We analysed the 112 text submissions using qualitative methods. We generated a word cloud to identify the topics most frequently mentioned. The word cloud showed that "health", "environment", "life", "society", and "medical care" were the top-ranked terms with 646, 324, 280, 229, and 207 uses respectively (appendix p 3). Although some of the terms shown in the appendix like "green" and "environmental protection" directly supported sustainable objectives, other terms like "waste" and "pollution" suggested challenges Chinese society would have to overcome to build healthy cities. Moreover, we used

thematic analysis to examine the textual responses for creating a healthy city. We identified a broad range of community perspectives and solutions for healthy cities in China. For example, some participants remarked that urban floods



See Online for appendix



Figure: Infographic of the crowdsourcing contest

For the open access pages on Wikipedia see <https://en.wikipedia.org/wiki/SESH>
 For the open access pages on SESH Global see <http://www.seshglobal.org/page101.html>

were common and recommended sponge cities. This approach uses water-permeable materials to capture, control, and recycle rainwater to mitigate the impact of floods. A few participants suggested that urban cities with limited space could use vertical farming. Vertical farming cultivates plants within skyscrapers or on vertically inclined surfaces.⁸ One described an online solid waste recycling system. In this system, a waste management company collects unwanted items and credits can be assigned to people if they recycle waste through the system. The credits can then be used to pay utility bills, or purchase other products. Some emphasised a strong judicial and anti-crime system to ensure personal and property security, which were considered a major factor affecting people's happiness.

We describe a rare example of LMIC community engagement in healthy cities. In a short period of time, this contest solicited substantial

online attention and contributions. Crowdsourcing could be a useful tool to solicit public perceptions of healthy cities in other LMIC settings. Such grassroots perspectives could increase the accountability, transparency, and effectiveness of Healthy City policies.

We declare no competing interests. The Healthy Cities Contest Team includes Chuncheng Liu, Na Cong, Xiayan Liu, Shufang Wei and Yu Zhang. We would like to thank Helena Wang, Jun Ma, Jun Yang, Peng Gong, Bing Xu, and Selina Lo for advice and support. The study was funded by The China Healthy Cities Steering Committee.

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