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Mental health key to tourism infrastructure in China’s new megapark

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ABSTRACT

The global economic value of parks through improved mental health of tourists has been estimated at about ten times greater than direct park tourism expenditure. The Chinese term for this health services value is jìng huà xìn líng, psychological destressing. Here we present the first case where optimal tourist infrastructure is influenced by including mental health. Using a multi-stage, cross-lingual, differential stakeholder method, we analyse conflicts between road- and roadless-access tourism in the very large new Sanjiangyuan National Park, Qinghai, which offers jìng huà xìn líng to domestic tourists from eastern-seaoboard cities. This provides a powerful tourism attraction, and hence economic opportunity, for the region around the park. If these mental health aspects are included, together with their direct and indirect consequences for tourism, then roadlessness is preferable to new roads. Similar infrastructure conflicts occur for park tourism worldwide, and jìng huà xìn líng can provide a global theoretical framework.

1. Introduction

Park tourism is a large sector, with global annual turnover around US $600 billion (Balmford et al., 2015). The domestic park tourism sector in China is large and rapidly growing, and the Chinese domestic tourism industry as a whole included ~3 billion trips in 2019. China has many different types of protected areas, managed by different government agencies and at different levels, some receiving many millions of tourists annually (Buckley et al., 2016; Zhong et al., 2015). Management of parks and park tourism, and motivations and behaviours of park tourists, show some similarities between China and Western nations, but also some distinct cultural differences (Buckley, Guitart, et al., 2017; Cheng, 2017; Cong et al., 2017; Gao, Zhang, & Huang, 2017; Gu et al., 2018; Jin et al., 2019; Zhong et al., 2015). Most parks have a single management agency, with a strong presence on site, and direct and powerful control of tourists, tour operators, and any other enterprises inside park boundaries.

Here, in contrast, we examine tourism management in a Chinese protected area that is very large, newly designated, in a new category, and as yet, largely lacking in either tourism infrastructure, or an active on-ground management agency. Tourism is largely unregulated, and there are active political contests over tourism infrastructure, focused on a conflict between road-based or roadless access to an iconic destination area. There are multiple stakeholders, with different aims and influences. The outcome determines future tourism and conservation management. We analysed this conflict using a large-scale, multi-stage, cross-linguistic, qualitative approach, adapted to Chinese social dynamics. We conducted a differential tourism stakeholder analysis, including representatives of national, provincial and local government agencies, commercial tourism enterprises, and individual tourists. Findings contribute to tourism management theory at three levels: parks, health, and culture.

2. Theoretical framework

We adopt a theoretical framework with three interlinked tiers (Figs. 1 and 2). These are: tourism and parks (Buckley, 2017; Leung et al., 2018); tourism and health (Holland et al., 2018; Mygind et al., 2019); and tourism and culture (Buckley, Cater, et al., 2008; Gao et al., 2017). Park tourism management research has shown that the economic, social and environmental consequences of park tourism depend on numbers, seasonality, group sizes, equipment, activities, motivations, expectations, intentions, behaviours, education, regulations, hardening, ecosystems, access, terrain, and regional physical and human geography; but the quantitative relationships between these factors remain contested, and there is no general model (Buckley, 2017; Leung et al.,...
Specific component of park tourism theory: namely, that tourism contributes to conservation only if park regulation precedes tourism growth (Monz et al., 2013; Zhong et al., 2015). Here we consider one component of research on tourism and wellbeing more generally (Chen & Li, 2018; Lengieza et al., 2019; Levi et al., 2018; Pyke et al., 2016; Smith & Diekmann, 2017; Uysal et al., 2016). Improved wellbeing has an economic health services value through reductions in costs of poor mental health (McDaid et al., 2019; Patel et al., 2018). For park tourism, this health services value is estimated at ~ US$6 trillion p.a. globally (Buckley, Brough, et al., 2019), ~10x tourism expenditure (Balmford et al., 2009, 2015). As yet, there is no general theoretical or quantitative model linking park tourist personalities, experiences, and psychological outcomes; and park tourism management and infrastructure have not included health services values. Here we present the first known example, particularly relevant during recovery after the 2020 COVID-19 pandemic.

Countries engage in reciprocal cross-cultural adoption, adaptation, and hybridisation of social concepts, including those related to nature, health and tourism (Buckley et al., 2014, 2008; Gao et al., 2017). Cultural context exerts powerful controls on Chinese domestic tourism (Hau & Huang, 2016; Lee & Bai, 2016; Tucker & Zhang, 2016), including park, nature and adventure tourism (Cheng, 2017; Du et al., 2016; Gardiner & Kwek, 2017; Packer et al., 2014). The same applies worldwide (Buckley, Shekari, Mohammadi, Azizi, & Ziaee, 2020; Floyd et al., 1993; Landauer et al., 2014; Marion & Reid, 2007; Martin, 1999). Here, we analyse the relation between parks, tourism and health within a Chinese cultural context, including: Chinese adoption of an international category, IUCN-II, of protected areas and tourism; and international adoption of a Chinese concept in health services, jing hua xin ling, through park tourism. This term, literally “clean and purify heart and spirit”, signifies the mental calming effect of contact with nature. It is more general than the Japanese term shinrin yoku, forest bathing (Oh et al., 2017). English analogues include inner peace or psychological detoxification, e.g. from digital communication (Egger et al., 2020; Fu, 2008; Li et al., 2018; Tribe & Mkono, 2017).

3. Methods
3.1. Study site and tourism context

To examine these theoretical issues, we consider a controversy over tourism infrastructure in the newly declared Sanjiangyuan National Park (SNP) in the southern half of Qinghai Province, the eastern section of the Tibet Plateau in north-western China (Buckley et al., 2016). SNP is 123,100 km² in area (Fu et al., 2017), the world’s largest vegetated terrestrial national park. The only larger parks are: one glacial park in Greenland; various marine parks; and one transfrontier conservation reserve in Africa. China has many types of protected areas (Buckley et al., 2016; Zhong et al., 2015), some with high-volume tourism and low-impact infrastructure (Buckley et al., 2017; Zhong et al., 2015). None are classified internationally as IUCN-II protected areas. China has declared 9 new National Parks, on a pilot basis from 2017 to 2019, and permanently from 2020, aiming for recognition as IUCN-II (Li, Xiao, et al., 2016; Ouyang et al., 2016). SNP is by far the largest of these.

Both tourism and local livelihoods in SNP are strongly influenced by altitude, climate, seasonality, snow cover, and climate change (Cai et al., 2014; Ge, Kong, Xi, & Zheng, 2017; Li & Chi, 2014; Li et al., 2006; Lian & Jiong, 2009; Wang, Zeng, & Zhong, 2017; Yan et al., 2015). Mean elevation is 4200 m, with numerous peaks >5000 m. SNP is largely roadless, unusual in China (Du et al., 2016; Gao et al., 2017). It is important for conservation of Tibetan antelope, snow leopard, pika, and...
tourism and in construction, eg roadbuilding. Some tourists are linked to government officials, through personal connections, partnerships, or state-owned enterprises. Fourth, there are local, national and international non-government organisations, NGOs, with interests in conservation or community development (Shen & Tan, 2012).

We conducted interviews in Beijing, Yushu, Zaduo, Angsai, and Banggeyong (Table 1). The authors include members bilingual in Chinese and English. The Angsai field team included Tibetan-speaking members, some fluent in English and others in Chinese. All meetings, conversations and discussions were subject to two- or three-way translation on-site. Those in Zaduo, Angsai, and Banggeyong, inside SNP, were recorded by a professional videographer. Three interview techniques were used: standard individual semi-structured interviews with experts and senior stakeholder representatives; small-group on-site interviews with lower-level representatives of stakeholder groups; and a two-level, three-stage nested focus group approach for government stakeholders. The social dynamics of qualitative data compilation are different in China than in Western Anglophone nations, and this third approach takes advantage of Chinese small-group interactions.

We interviewed self-drive road tourists at individual campsites and at tourist attractions, focussing on where the tourists lived, their motivations to visit SNP, travel logistics and information sources, previous experience in 4WD vehicles and unstructured camping, and activities and experiences. In Angsai, we ran five focus groups. Each joined a one-day raft tour, and included Tibetan, Chinese, and English-speaking government officials and tour company staff. The groups included 11 staff members from the tour company, plus 17, 27, 20, 23 and 33 government officials respectively, ie 120 in total. Focus group approaches were modified to match Chinese expectations and practices for group participation.

### Table 1

Structure of single and multi-stage cross-lingual interviews and focus groups.

| Stakeholder | Place | No | Step 1 | Step 2 | Step 3 |
|-------------|-------|----|--------|--------|--------|
| Government P.M | ZaQu, 1 | 17 | Briefing, C, T | subgrp, C, T | full group, C, T,E |
| Government P.M | ZaQu, 2 | 27 | Briefing, C, T | subgrp, C, T | full group, C, T,E |
| Government P.M | ZaQu, 3 | 20 | Briefing, C, T | subgrp, C, T | full group, C, T,E |
| Government P.M | ZaQu, 4 | 23 | Briefing, C, T | subgrp, C, T | full group, C, T,E |
| Government P.M | ZaQu, 5 | 33 | Interview, C | translation | extract, compare |
| Government | Angsai | 3 | Interview, C | translation | extract, compare |
| Gov Development | Zaduo | 1 | Interview, C | translation | extract, compare |
| Gov Tourism | Yushu | 1 | Interview, C | translation | extract, compare |
| Gov Parks, N | Yushu | 3 | Group | translation | extract, compare |
| Parks research | Beijing | 5 | Group | translation | extract, compare |
| Tour research, N | Beijing | 5 | Group | translation | extract, compare |
| Tour staff, rafting | ZaQu | 11 | Group | translation | extract, compare |
| Tour staff, ecocamp | Bangg | 3 | Group | translation | extract, compare |
| Tourists, self-drive | Bangg | 6 | Group | translation | extract, compare |
| Tourists, self drive | Bangg | 10 | Group | translation | extract, compare |
| Tourists, self-drive | road pass | 3 | Group | translation | extract, compare |
| Tourists, self-drive | road pass | 7 | Group | translation | extract, compare |

* Government levels: N, national; P, provincial; M, municipal; L, local.

* Languages: C, Chinese; T, Tibetan; E, English.
consensus. Discussions took place in three stages. The first stage was a 1-hr briefing and discussion on the river bank. The second comprised separate discussions on each raft, over ~5 h each day. The third was a 1–2 h formal group discussion on the river bank, at the end of each day. All interviews were subject to three-way translation in the field (Table 1).

We used these stages as a screening and prioritising process. Each small-group discussion identified key issues, and each full-group meeting focussed only on these specific topics. This approach provided a novel way to identify and integrate different perspectives across multiple languages, using a multi-step consultation process. Dividing large groups into smaller subgroups for discussion, and then reintegrating results though another full-group meeting, is a standard tool in corporate planning, but it seems, not previously in qualitative research. It is effectively a nested dual-scale focus group approach. By taking advantage of the structure of raft tours, with small subgroups separated from each other for most of the day, we were also able to circumvent cultural pressures for groups to follow the opinions of their most senior member. This allowed Tibetan participants to express opinions that might be contrary to those of their Chinese colleagues, and local government participants to express opinions contrary to those of provincial governments. The presence of tour-company guides on each raft, able to relay the substance of each small-group discussion directly to the raft tour owner and researchers, provided triangulation of group reports.

3.3. Analyses, authors’ positions, and languages

Our data thus consisted of individual interviews from a smaller number of stakeholders, and multi-stage group interviews from a larger number (Table 1): >850 person-hours in total. This is 10–20 times more person-hours than most qualitative analyses (Denovan & Macaskill, 2017; Buckley et al., 2020). To compress these data for analysis, we adopted two parallel strategies. For the individual interviews, we used standard constant-comparison qualitative analysis, with iterative extraction, coding, and classification of concepts (Glaser & Strauss, 2017; Stern & Porritt, 2017), cross-checked by 3 independent analysts, and repeated until theoretical saturation and efficient coding were achieved (Aldiabat & Navenec, 2018; Nelson, 2017; Saunders et al., 2018). For the three-step focus groups, we used the internal group processes to generate higher-level constructs directly, and focussed on comparing stakeholder narratives, as in similar previous bilingual analyses (Shakeela and Weaver, 2017; Buckley et al., 2020). We were able to treat these discussions as nested non-statistical replicates, between days and groups. We can compare perspectives of different groups in the same stakeholder categories, and contrast the views of different stakeholders.

The authors’ positions are as follows. The first two authors have visited Qinghai at intervals since the 1980’s, for research on tourism and conservation. They have also visited nearby regions of eastern Tibet, western Sichuan and Gansu, and northern Yunnan Provinces. The first author is a multi-decade member of both river-rafting and 4WD-selfdrive camping communities, in China and internationally, over the past 25 years. The second author has been heavily involved in ecotourism policy and planning within China, on behalf of the China National Tourism Administration and various provincial and prefectural governments. The third author is a former director of Grand Canyon National Park, USA, with particular expertise in the design and management of road-based sightseeing and roadless river tourism. He is a long-term member of outdoor adventure tourism communities, including river-rafting and 4WD-camping, and the community of park rangers and managers. The second author is Chinese, but bilingual in English.

4. Results & discussion

4.1. Replication and consistency

A total of 178 informants were consulted (Table 1). Of these, 120 were interviewed using the three-step focus groups as above. We found a high degree of consistency between different groups in each of the stakeholder categories. The multiple raft-loads of government officials on the Za Qu, over each of the 5 days, all raised the same issues repeatedly, even though their individual views on each issue were coloured by their agency responsibilities. The groups of self-drive 4WD road camping tourists each expressed very similar perspectives.

4.2. Major issues and stakeholder perspectives

The principal issues raised repeatedly by all stakeholder groups are listed in Table 2, the basic coding tree from interviews and focus groups. There is as yet no effective management agency for the new national parks, creating a power vacuum in which stakeholders compete directly. The various stakeholders can be divided broadly into pro-road and no-road champions. These are listed in Table 3, which also lists the rationale for each. Subsequent paragraphs consider the four key concerns expressed, namely: road construction; mental health, conceptualised as jing hua xin ling; future tourism demand; and National Park designation. All four of these factors are interlinked, and tourists themselves appreciate their interplay. Government officials and tour operators may have less flexibility in their comments, the former since they have predefined top-down objectives, and the latter since they have invested in particular business models.

This was the most immediate local controversy, raised by all government and tourism industry stakeholders in Yushu, Zaduo, Angsai, Banggeyong, and the Za Qu. Stakeholders could not reach consensus on two critical issues. The first is whether future park visitors will want roads or not. The second is whether new roads would disqualify SNP from listing as an IUCN-II park, and with what consequences for tourism. Currently, development agencies promote roads. Near Yushu, unpaved roads have been rebranded with tourist names, signs, footbridges and small-scale food outlets to attract self-drive visitors. Tourism

Table 2
Principal issues raised by stakeholders. Road or roadless tourism.

| Main themes                        | Principal issues                                                                 |
|------------------------------------|----------------------------------------------------------------------------------|
| Tourism markets and attractions    | Most tourists in SNP are young, well-off families from eastern cities                |
|                                    | Za Qu valley, Angsai and Banggeyong, is the main tourism hotspot                   |
|                                    | Cultural landscape, yak herds and tents, is another tourism attraction              |
|                                    | Future domestic tourism demand for independent travel opportunities                |
| Tourism and health                 | Renewing mental health through nature, via jing hua xin ling                      |
|                                    | Demand for nature experiences to recover from workplace stress                     |
|                                    | Also for “clean air clean water” holidays to escape urban pollution                |
| Tourism infrastructure             | Avoid high-volume infrastructure as at existing iconic destinations               |
|                                    | Effect of infrastructure on IUCN designation and hence tourism                    |
|                                    | Critical controversy is over road infrastructure or roadless access                |
|                                    | Including jing hua xin ling tips the balance to roadlessness                      |
officials are developing loop or circle self-drive routes throughout the prefecture (Xie et al., 2014). Tourists fly to Yushu, rent four-wheel-drive vehicles, and drive to sites where they can camp from their cars, near streams in the surrounding mountain valleys. In SNMP, there is a road from the Yushu-Zaduo highway into Angsai Valley, and a bridge at Angsai Village. There is also a newly constructed high-voltage power line to Angsai Village. Both detract considerably from the scenic splendour of the valley and Za Qu river corridor. Downstream of Angsai, there is an unpaved road to a second bridge. Below that, there is a new unpaved road to Banggeyong, cut in 2017. This includes sections blasted through vertical cliffs, with blast spoil left in the river. There is a dead-end road up Banggeyong Valley. There is an older dirt road from the lower bridge, over a 4800 m pass, to a paved road from Zaduo to Zeduoxiang. All of these roads are currently used by self-drive park visitors.

River-based tourism operators, both Chinese and Tibetan, oppose further road construction in Angsai Valley, because it detracts from their commercial opportunities. Raft tour operators propose that self-drive access should be along the river valley only as far as Angsai Village, and then along a loop away from the river, for access to Banggeyong. Road opponents argue that loop-road access multiplies opportunities for park visitors, with non-motorised hiking and rafting along the river, and vehicle-based sightseeing and wildlife sightings on mountain slopes and passes. It also diffuses visitors and tourists across a broad geographical area, providing economic opportunities for a wider range of local communities (Nyaupane, Morais, & Dowler, 2006; Nepal, 2007; Gurung, 2008).

4.3. Mental health: jing hua xin ling

The mental health benefits of peaceful tourism in roadless areas were mentioned repeatedly by many stakeholders, using the term jing hua xin ling. Increasing demand, scarcity, and economic value of opportunities for jing hua xin ling generate economic value for places and commercial tourism enterprises able to supply it. No-road stakeholders argued against the high-volume tourism model common elsewhere. They argued that jing hua xin ling is in short supply in modern China, and crowded parks don’t provide it. Parks in the south and east are small, and high in impact (Buckley et al., 2016). Large low-impact areas exist only in the northwest. If it remains roadless, lower Angsai can provide rare opportunities for jing hua xin ling. This is much more valuable than simply acting as a small section of the many self-drive road routes. The value of roadlessness will be even greater, if a valley with new paved roads would not. By supplying jing hua xin ling, roadless areas are SNMP’s most valuable tourism resource.

4.4. Future tourism demand

Chinese domestic outdoor tourism is changing rapidly (Buckley, 2016). Some officials assume that the switch from bus tours to self-drive recreation will continue. Others, including NGOs and some commercial tourism enterprises, think that roadless areas will command a premium, for mental health reasons. The principal source markets are younger, middle-income generational cohorts in the large cities of eastern China. They have higher incomes than their parents, and fewer restrictions on domestic travel. They are well informed about outdoor recreation in China, and can buy domestically produced equipment and clothing (Buckley, 2016). They can drive four-wheel-drive vehicles, and set up campsites.

There are also powerful push factors. Urban pollution gives rise to “clean air, clean water” or “forest oxygen bar” (sen ling yun be) holidays, designed to restore physical health to city dwellers. Urban residents, in China as elsewhere, also suffer high stress, alleviated by time spent in pristine natural environments. Such areas are rare in southeastern China; only in the northwest are there large areas with low human footprint (Buckley et al., 2016). The future tourism value of SNMP will therefore be higher if some sections remain roadless.

4.5. National park designation

A key question, identified by many stakeholders, is whether current and proposed future uses are compatible with IUCN-II designation, since that will greatly influence global tourism marketing. Pastoral livestock herding is permitted in IUCN-IV protected areas, but not IUCN-II. Traditional subsistence hunting and gathering may be permitted, but only under strict guidelines. SNMP could be classified as an IUCN-IV National Park, as for those in the UK and EU. Alternatively, yak herders could be displaced from sections of SNMP, to allow designation as IUCN-II. There is an ongoing policy to move nomads to fixed settlements. More complex issues will arise if yak herding evolves from subsistence family operations, to a consolidated commercial model. Similar issues have arisen in other countries. This could lead to IUCN declassification and loss of tourism income.

Agsai Valley is the most heavily visited destination in SNMP. Designation as IUCN-II, a National Park in the international sense, will greatly increase its tourism value. SNMP is by far the largest of China’s nine new National Parks, and the total area of IUCN-II Protected Areas in China will be significant only if SNMP is accepted as IUCN-II. The definition of IUCN-II Protected Areas prohibits residential roads, and limits visitor roads. From tourism economics and policy perspectives, it is thus critical to maintain roadlessness in the lower Angsai Valley. This requires that the Angsai-Banggeyong river section should be roadless, with road access to Banggeyong via an off-river loop route.

Currently, there is a political power conflict in SNMP, between different tiers and portfolios of government. Similar political processes have been identified previously, for hydroelectric dams and power stations in western China (Zhong et al., 2010), and worldwide (Romero-Brito et al., 2016). The new National Parks are designated at national government level, but do not yet have a functional National Parks Service to manage them. The local Zaduo government recognises the tourism value of roadlessness, but is powerless to achieve it. Provincial government agencies concerned with road and electricity infrastructure, rural development and poverty alleviation, and tourism promotion, already have budgets, work plans, and the political power to override local governments. They are therefore going ahead, with no-one to stop them.

5. Conclusions

These findings generate conclusions relevant to each tier of our

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Table 3

| Stakeholder perspectives, pro-road or pro-roadless. |
|-----------------------------------------------|
| Stakeholder groups and champions | Rationale and comments |
|---------------------------------|-----------------------|
| **Pro-road**                   |                       |
| Provincial government road agency | Have budget, staff, and equipment to do it |
| Provincial government tourism agency | Have designed loop drive itineraries |
| Local government development agency | Want all residents connected to roads |
| 4WD rental companies in Yushu | Business model depends on roads |
| **Pro-roadless**               |                       |
| Local government tourism agency | Roadless tourism is a national opportunity |
| National government parks agency | Want SNP to be an IUCN-II National Park |
| River rafting tour operator | Have exclusive skills and business model |
| Self-drive 4WD camping tourists | Enjoy low-volume tourism experience |
| **Unclear, undefined or uncertain** |                       |
| National government tourism agency | Tourism Master Plan for SNP doesn’t specify |
| Individual tourists, road and river | Little knowledge of history or controversies |
| Officials and researchers in Beijing | Understand national but not local issues |
Tourism management, its links to mental health, and its embedding in human cultures. For the lowest tier, park tourism management, the same physical management issues apply worldwide: e.g., tourist access, infrastructure, volume, dispersion, and environmental impacts. The same menu of management and monitoring tools is available. The selection and application of those tools in different parks, however, depends heavily on cultural factors, including local politics. Current conflicts in SNP support prior findings (Buckley, 2017) that parks agencies require well defined rules, and the capacity to enforce them, before starting the engine of tourism growth. Conflicts in SNP have occurred because of this power vacuum.

For the middle tier in our theoretical framework, namely the links between tourism, nature and health, the SNP case makes a substantial novel addition to current theory. Previous research has shown that: nature exposure is beneficial for human mental health (Bratman et al., 2019); park tourism can provide that nature exposure safely (Buckley, 2019); and the economic value of parks via human mental health is an order of magnitude greater than the economic scale of the park tourism sector (Buckley, Brough, et al., 2019). The SNP case shows, apparently for the first time, that adding mental health into planning considerations changes the relative advantages of different infrastructure strategies. In this case, it shows that roadlessness in key destination areas is preferable to new roads. This specific outcome arises because of modern China’s particular social and cultural circumstances, and the particular geography of the new national park. The addition to theory is that explicit consideration of health services value, as well as tourism and nature, changes optimal practices in park tourism management. This finding is novel, and equally applicable worldwide.

For the highest tier in our theoretical framework, namely the reciprocal adoption and adaptation of cultural concepts, the SNP case yields two novel additions to current theoretical frameworks. The first relates to cross-cultural understanding. Some of the provincial government stakeholders at SNP argued that since there are roads inside some IUCN-II National Parks in the USA, new road construction in SNP should not preclude it from recognition by IUCN as a Category II projected area. This represents a misinterpretation of the IUCN classification system. The roads in the US IUCN-II parks predate their declaration, whereas those under debate in SNP are new. Some stakeholders also believed that the IUCN Categories could be modified within China. This is unlikely, however, since the Categories were derived from an extensive process of global consensus.

The second novel addition at the highest tier of our theoretical framework, and perhaps the most interesting overall, relates to the potential value of adopting Chinese traditional concepts worldwide. In this case, the theoretical arena is the cross-linkages between tourism, nature and health; and the Chinese traditional concept is jing hua xin ling. In recent decades, China has adopted a number of Western concepts in this field, but adapting, modifying, and hybridising them within Chinese cultural structures. Thus, ecotourism led to shengtai luyou, ecology tourism (Buckley, Cater, et al., 2008), and river rafting led to piaoluo ziyou (Buckley et al., 2014), both of which are different from their Western origins. Western cultures also have a long history of adopting and adapting Eastern concepts, from yoga to shinrin yoku, forest bathing. Yoga in the USA is very different from that in India, and commercial forest bathing tours in the USA are very different from individual cultural practices in Japan.

In Western nations currently, there is widespread recent recognition of the value of nature for mental health (Bratman et al., 2019), and of digital detoxification (Egger et al., 2020; Li et al., 2018; Tribe & Mkono, 2017): a break from continuous communications, allowing greater mental concentration on present circumstances and surroundings. It is these factors that create the health services value of parks (Buckley, Brough, et al., 2019), and the resulting new opportunity for nature tourism (Buckley, 2019). Our findings here show that health services value can influence park tourism management. More broadly, they show that jing hua xin ling, a much broader concept than either shinrin yoku or digital detoxification, could be adopted globally as a guiding principle in park tourism management. It will be especially relevant worldwide during recovery from mental health impacts of COVID-19 lockdowns.

In Chinese-language tourism research, the concept of jing hua xin ling has been mentioned in two main contexts. The first, rather different from the current study, is in the way that religious practices can affect non-religious tourists, and hence become expressed as part of tourism experience. This can occur through immersion in a religious social atmosphere, which may either be authentic, as for some Chinese tourists visiting Tibet (Cui et al., 2014; Xie et al., 2019), or simulated, as for meditation tourism (Jiang & Zhang, 2019).

The second, much closer to the current analysis, is through the embodied experience of Chinese hikers and trekkers in nature (Xie & Fan, 2017). A qualitative analysis of journals and interviews identified a progression from physical activity, to emotions, to the experience of immersion or nature connectedness (Martin et al., 2020), and finally to jing hua xin ling. This is more comprehensive and explanatory than studies of mental health effects perceived by Western nature and outdoor tourists (Buckley, 2019, Buckley, 2020a). The Chinese analysis (Xie & Fan, 2017) identified a progression or mechanism within individual tourists. The activity of trekking in nature was perceived as the direct cause of changes in emotions, connectedness, and worldview, specifically jing hua xin ling. There does not appear to be any analysis in the English-language literature of outdoor parks, nature, and adventure tourism, that links all these components in the same way. This represents a key priority for future research.

Author Bios

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Impact Statement

Shows that economically and socially optimal design of park tourism infrastructure such as roads, can be affected by including health services value, the economic value of mental health gains from park visitation. Confirms that tourism contributes to conservation only if effective environmental regulations and a functional park management agency are in place prior to tourism growth. Shows that jing hua xin ling, psychological destressing, can act as a major tool in tourism marketing, and that nature tourism can contribute to mental health during the post-pandemic recovery period.

Declarations of competing interest

None.

CRediT authorship contribution statement

Ralf Buckley: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Writing - original draft, Writing - review & editing. Linsheng Zhong: Conceptualization, Formal analysis, Funding acquisition, Investigation, Project administration, Resources, Validation, Writing - review & editing. Steve Martin: Conceptualization, Data curation, Investigation, Methodology, Writing - review & editing.
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