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Can digital-free tourism build character strengths?

Jing Li[a], Philip L. Pearce[b,*], Hera Oktadiana[b,c]

[a] School of Management, Jinan University, 601 Western Huangpu Avenue, Tianhe District, Guangzhou 510632, China
[b] College of Business, Law and Governance, James Cook University, 1 James Cook Drive, Townsville, QLD 4811, Australia
[c] Trisakti School of Tourism, Jakarta, Indonesia

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ABSTRACT

The perception of digital-free tourism for developing character strengths was explored. A golden evidence triangle fusing the views of three respondent groups was established to assess trustworthy digital-free tourism-character strength linkages. Nine strengths were commonly acknowledged. They were distributed across a three-layer tiered model according to their relative importance. The strengths developed in digital-free tourism include: self-regulation, appreciation of beauty and excellence, social intelligence and open-mindedness for the core layer; vitality, love and perspective for the secondary layer; spirituality and creativity for the peripheral layer. The roles of each verified strength and the mechanisms for developing character strengths in digital-free tourism were captured in a three-stage travel narrative.

Introduction

The present research reflects our interests in the perceived positive outcomes of digital-free tourism (DFT). As a contemporary form of tourism, DFT involves holidays where there is reduced use of electronic devices and the internet (Li et al., 2018). We seek to explore the specific links between reduced digital connectivity in tourism contexts and the perceived development of character strengths that are conducive to tourists' well-being (Peterson & Seligman, 2004). The work on character strengths and virtues from positive psychology provides the conceptual base for the study. Our sources of evidence are the perspectives and experiences of DFT tourists, verified by incorporating professional judgement of DFT suppliers and the critical evaluations of IT and tourism academics.

The phenomenon is contemporary and growing, but the potential of DFT to benefit tourists, especially its long-term impacts, has not been considered systematically from a theoretical perspective. Knowledge about the ways DFT can help tourists improve themselves are limited; although DFT tourists' motivations and emotional responses have been studied in recent years (Cai et al., 2019; Egger et al., 2020; Floros et al., 2019; Li et al., 2018).

Key conceptual and theoretical schemes from positive psychology offer fruitful links for such an examination of the perceived effects of being off-line (Pearce, 2009; Seligman & Csikszentmihalyi, 2014). In particular, the extensive work on character strengths and virtues provides a pathway to understand the role of reduced technology use in producing personal benefits (Peterson & Seligman, 2004). The core of this argument is that for many tourists, who are so accustomed to using their devices for enjoyment, information, socialisation, and checking on their work world (Wang et al., 2016), being off-line presents genuine challenges. The ability to deal with limited digital resources may develop some of the key character strengths that have been shown to be building blocks of well-being. The 24 character strengths described in rich detail in the positive psychology literature will form a basis for categorising the claims for beneficial DFT outcomes (Peterson & Seligman, 2004).

* Corresponding author.
E-mail addresses: jingli926@jnu.edu.cn (J. Li), philip.pearce@jcu.edu.au (P.L. Pearce), hera.oktadiana@jcu.edu.au (H. Oktadiana).

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Specifically, the information provided by tourists, providers and scholars will be compared across groups to form a 'golden evidence triangle' (Cukurova et al., 2019). Commonalities among the three groups will facilitate a comprehensive understanding of the possible links between DFT and the development of character strengths. The overriding goal of the work is driven by the questions do the informants agree that digital-free tourism builds character strengths and further, what sorts of strengths are identified and how are they produced?

Literature review

Digital disconnection in tourism

There is a wide-spread endorsement of technology adoption in tourism research (Minghetti & Buhalis, 2010; Wang, Xiang, & Fesenmaier, 2014; Willis et al., 2017). Nevertheless, negative impacts of ubiquitous ICT applications in tourism and hospitality, especially constant smartphone use and social media checks by holidaymakers, are gaining increasing attention (Lalicic & Weismayer, 2018; Neuhofer, 2016; Neuhofer & Ladkin, 2017).

Some descriptions characterising modern tourism, such as "distracted gaze", "de-exoticising", "de-capsulation", and "digital elasticity", represent attempts to label the deleterious effects of problematic use of ICT on tourist experience (Ayeh, 2018; Pearce, 2011, p. 41; Tanti & Buhalis, 2016). The concept of "e-lineation" has also been proposed to showcase tourists' negative social life experiences induced by excessive ICT engagement, including collapsing social norms, superficiality, meaninglessness, isolation, and powerlessness (Tribe & Mkono, 2017).

A few recent studies have explored emotions and motivations among DFT tourists (Cai et al., 2019; Fan et al., 2019; Floros et al., 2019). Tourists' emotional responses to DFT are distributed on a spectrum form being anxious to relaxed, depending on particular travel intentions, destination environments, and daily ICT use behaviours (Cai et al., 2019; Chen et al., 2018; Hoving, 2017; Upadhyay & Mishra, 2017). Motivations to unplug on holiday have also been considered. In particular, escape, personal growth, health and well-being, and improved relationships have been identified as important factors driving tourists to get off-line (Egger et al., 2020). In one study, 12% of Taiwanese tourists did not take or use smartphones in their most recent travels; and 50% avoided distant work communications (Chen et al., 2018). In a Netherlands study, Hoving (2017) found some Dutch holidaymakers selectively rejected electronic devices or mindfully disconnected during the whole holiday time. Higher proportions of campers, backpackers, and tourists having young children, compared to other tourists, are reported as seeking disconnection (Dickinson et al., 2016). The intention to reduce work related stress is another important motivator to disconnect (Chen et al., 2018; Kirillova & Wang, 2016). Other motivators to choose DFT include social needs (Cai et al., 2019), spiritual pursuits, concerns over information security, and reluctance to pay overseas mobile and internet fees (Dickinson et al., 2016; Tanti & Buhalis, 2016). At this point, however, there are no systematic assessments of the suggested benefits; nor the theoretical foundation for building better selves through DFT is well presented in previous literature. The researchers adopt the positive psychology work on character strengths to assist as a framework for such studies.

Character strengths and virtues

Character strengths, defined as positive traits reflected in thoughts, feelings and behaviours, lead to human flourishing and help increase well-being (Park et al., 2004; Park & Peterson, 2006; Peterson et al., 2007). The work of Peterson and Seligman (2004), writing from the perspective of positive psychology, represents a detailed attempt to catalogue human character strengths and virtues. They distinguish three levels of analysis in assessing the nature of character and the positive personal attributes. At the most abstract level, they use the term virtues that are core characteristics valued cross-culturally by philosophers and religious thinkers. The six broad categories of virtue identified from extensive source materials are wisdom, courage, humanity, justice, temperance and transcendence.

At a slightly more pragmatic and assessable level, which corresponds to what Rosch et al. (1976) have called a natural level of categorisation, 24 character strengths are identified. The character strengths can be seen as the routes to the virtues with each virtue typically having three to five character strengths. Examples of the character strengths include social intelligence, self-regulation, curiosity, creativity, appreciation of beauty and excellence, open-mindedness, vitality, and love of learning.

The third level of character analysis outlined by Peterson and Seligman is referred to as situational themes. Themes are habits and specific behaviours thoroughly tied to different settings, such as workplaces, domestic life, or public environments. Thus a situational theme, such as patience when waiting in line, is a specific habit underpinning the character strength of self-regulation that in turn contributes to the virtue of temperance. In the current research, the specific DFT participation is a situational theme that may require and affect several of the character strengths outlined.

There is solid documentation that character strengths can be developed and changed by recognising, intentionally displaying and using them in essential life domains (Park & Peterson, 2009; Quinlan et al., 2012). Although the strengths are closely related to broadly stable ways individuals behave; they are also contextualised traits, rising and falling in response to the demands of specifiable situations (Peterson & Seligman, 2004).

Developing character strengths in leisure and tourism

Leisure and tourism situations are promising contexts where individuals can sustain, increase, or create certain traits through

coping with unfamiliar environments. The roles of leisure pursuits in building particular virtues and character strengths have been explored (Laing & Frost, 2017). To take just one example, the virtue of courage, in terms of being authentic, has been related to transformative tourist experiences that change tourists' responses to anxiety after travel (Kirillova et al., 2017). The focus in tourism work has been on how specific strengths function to facilitate positive tourist experience. For example, humour has been found to be helpful for tourists to better connect with others and cope with difficult or stressful travel situations (Pearce & Pabel, 2015). Further, the impacts of tourism activities on developing character strengths have been found to continue and intensify in daily life after travel (Laing & Frost, 2017).

There are plenty of opportunities in tourism contexts to broaden individuals' experience, expand their usual daily contacts, learn and build skills, connect with different people, and experience new ways of being (Coghlan, 2015; Pearce & Foster, 2007; Smith & Diekmann, 2017; Uysal et al., 2016). Additionally, it can be concluded from the literature that the recognition and activation of character strengths in leisure and tourism are often related to dealing with difficulties in challenging situations (Littman-Ovadia & Steger, 2010).

Furthermore, in returning to everyday work and life, tourists may be able to use newly developed personal strengths from the DFT experience, thus facilitating their self-growth (Park & Peterson, 2006, 2009; Peterson et al., 2007). Like the physical challenges in demanding leisure activities, the extraordinary experience of unplugging provides the potential for increasing eudaimonic well-being through developing positive personal traits (Quinlan et al., 2012).

In addition, the relationship between technology (non-)use and the development of character strengths is understudied. Although students' levels of strengths and virtues were measured in select studies in education when new technology was adopted in classroom; the focus of that work was not on the influence of technology (Weber et al., 2016). Similarly in tourism and leisure, the impacts of technology, especially deprivation of digital resources, have not been studied.

A driving-activating-reinforcing framework

The researchers seek to develop a conceptual understanding of rewarding outcomes from DFT by investigating the perceived links between DFT experience and personal character strengths. The summary research framework in Fig. 1 illustrates the hypothesised mechanisms by which DFT contributes to the development of character strengths.

At the first stage: pre-travel, personal strengths play the role of driving tourists to choose DFT. Choosing a DFT holiday in itself may be a character building exercise involving managing expectations and conquering doubts. At the second stage: during travel, the digital-free holiday environments require and encourage tourists to make use of their existing strengths to cope with the disconnected situations. For example, consider the characteristic of persistence. Even for tourists who view DFT merely as an opportunity to relax, they need to depend on themselves and utilise their own strengths to adapt to such extraordinary situations. In DFT situations, such as finding the way, persistence may be sharpened because the duration of the DFT may not permit the use of a familiar resource such as Google Maps, and persisting with hand held maps and asking others for orientation may be needed. Similarly, other quite novel situations involving communicating with strangers may require fresh responses and behaviours to deal with the situation, thus resulting in acquiring new strengths. Potentially, some of the strengths identified may endure after the holiday and be employed to deal with tasks in daily routines. Fig. 1 portrays these possibilities. This conceptual framework will guide the researchers to categorise strengths into the three stages: pre-, during and post-travel.

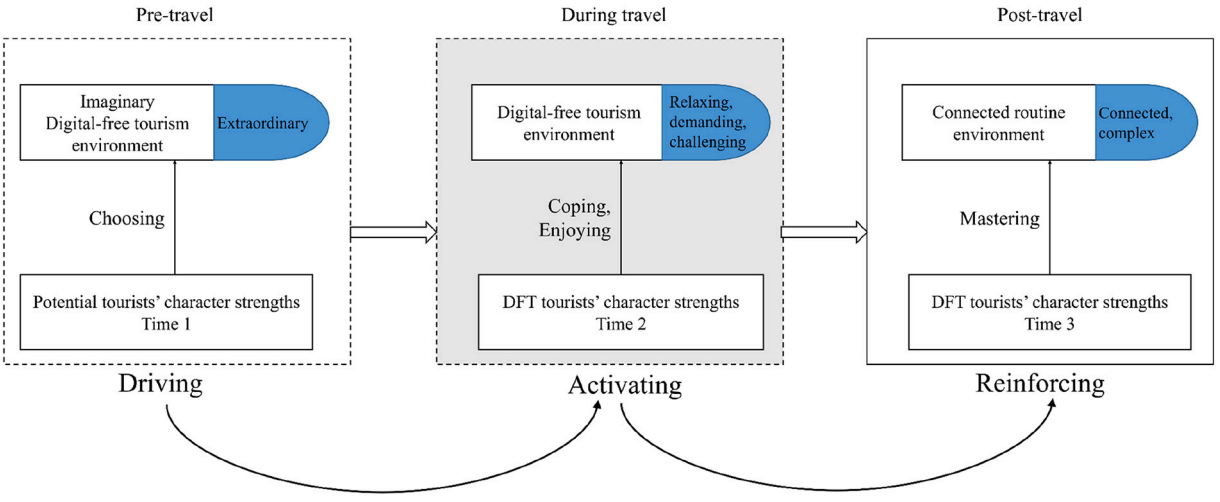

Fig. 1. Conceptual framework for positive linkages between digital-free tourism and the development of character strengths.

Methodology

Paradigm and positionality

The researchers employ a constructivist paradigm to pursue the multiple perspectives that might exist about digital-free tourism. Constructivism offers a framework that interprets social realities as comprised of not only physical materials that may be perceived differently, but also allows that individuals and groups view social and behavioural elements in diverse ways (Harrison, 2017; Jennings, 2010; Tribe et al., 2015). As individuals, the researchers remain equivocal about the nature and extent of the benefits of digital-free tourism and this positionality prompts our attention to recording and respecting respondents' diverse views about any kinds of positive outcomes of the activity (Caton, 2012). A constructivist paradigm therefore fits the needs of the study as it is built on a subjectivist epistemology and a relativist ontology (Dann, 1997; Jennings, 2010). These underlying principles defining a constructivist paradigm foster the use of naturalistic methods such as interviews, reading of what people write, and analysing open-ended comments, as well as requiring explicit expression of the researchers' position.

We adopt an emic approach to the research to be consistent with this paradigmatic and philosophical position. We attempted to meaningfully capture the full range of participants' views and attitudes on the topic (cf. Pearce & Gretzel, 2012). We have strived to avoid our and bias in data collection and analysis by employing open questions to encourage informants to express their perspectives. Secondly, as coders, we did not resort to deep or abstract inferences, focusing on identifying descriptions that were rich in the language of character strengths and checked for intercoder reliability. These specifics are documented in the following sections.

Key informants

Key informants were located by adopting purposive and snowball sampling techniques (Devers & Frankel, 2000). We decided to incorporate three groups of key informants, including tourists, DFT providers and IT and tourism academics to benefit from multiple perspectives (Cukurova et al., 2019). The research focus is primarily concentrated on tourists and their perceptions of potential links between DFT and enhancement of character strengths. Two methods were employed to verify the credibility of tourists' responses. Firstly, the researchers began coding the returned textual responses while collecting further data. This enabled the researchers to build and refine codes carefully. Data collection was finalized when no more concepts could be found from the last five responses in a row. This was the criterion for saturation.

Secondly, the other two groups of informants, including DFT providers and IT/tourism academics were also consulted. Providers and academics were requested to express their views of the relationship between DFT and tourists' traits based on their observation of situations that they witnessed and their knowledge of tourist behaviours. Specifically, the perspectives of three groups of informants were examined and compared. Common components in the discourses of the three groups were brought together. As a result, a golden evidence triangle was formed to confirm the link between characters strengths and DFT that were suggested by tourists.

The golden evidence triangle is a research approach that facilitates greater confidence in research findings by integrating the combined views of key stakeholders (Cukurova et al., 2019; Glasgow et al., 2012). It has been widely used for designing, improving and evaluating the impacts of products and services in various fields, such as medical science, education and management (Briner et al., 2009). The golden evidence triangle is especially useful in designing and implementing emerging and innovative practices, such as DFT. The approach is also sometimes known as respondent triangulation (Gomm, 2004).

Briner et al. (2009) asserts that by using the triangular approach, reliability of the findings about a topic are enhanced through conscientious, explicit and astute application of the sources of information. The approach incorporates a critical evaluation of research evidence, practitioner expertise and judgement, and the perspectives and values of those people who are directly or indirectly affected. In this study, IT and tourism academics provided research evidence; DFT providers contributed professional expertise and

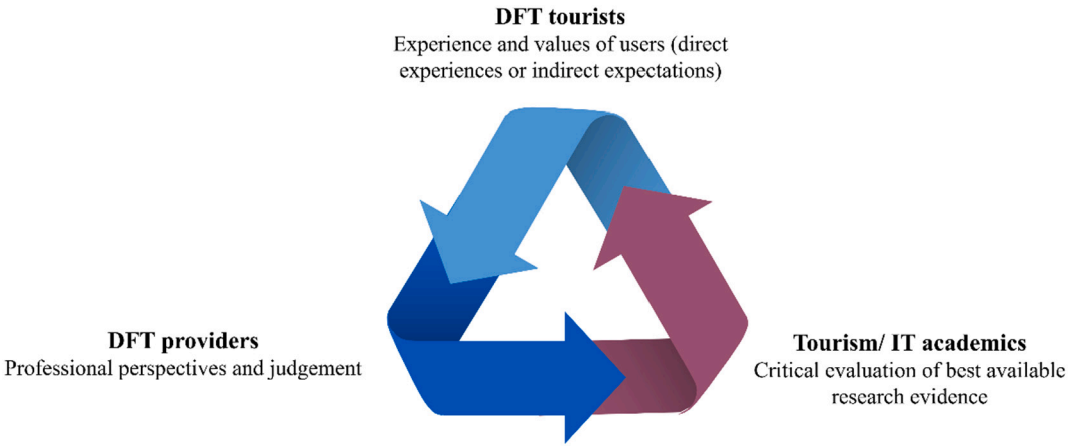

Fig. 2. Information sources for assessing DFT-character strength links.

judgement; tourists who have experienced DFT are exactly those direct beneficiaries. Fig. 2 displays the three sources of information for the potential links between DFT situations and development of character strengths.

We located tourists having personally experienced DFT through visiting their blogs about digital detoxing. DFT provider informants were found by reading online advertisements for DFT and contacting representatives of the business. Authors of highly cited publications studying ICT-tourism relationships were contacted as academic informants. Some of the contacted tourists recommended others who had experienced in DFT; providers also helped contact their customers as tourist informants. Criteria for informant selection were: tourists must have experienced of at least 4 h of digital-free time when having a holiday away home; providers must be running DFT programs; and academics must have published research on the relationship between tourism and ICT. Four hours were selected as the threshold for the definition of DFT because it covers a whole period of a morning, afternoon or evening, arguably each of which is long enough to produce the impulse to check on digital devices. Next, we emailed the expected informants an invitation message followed by an information sheet, a consent form, and the URL of a Qualtrics web-based questionnaire from 30 January to 5 May in 2018.

Additionally, the sample was filtered by only retaining responses from those who generally held positive attitudes towards DFT. Initially all respondents contacted were asked to complete two scales after they understood the theme of this study and before they answered the main open-ended questions. The scales were: “How common do you think over-use of ICT is among tourists?” (1-Very uncommon; 2-Somewhat uncommon; 3-Neither common nor uncommon; 4-Somewhat common; 5-Very common); and “How much do you think digital-free tourism can benefit tourists?” (1-None at all; 2-A little; 3-A moderate amount; 4-A lot; 5-A great deal). The participants scoring over 1 for both scores are designated hereafter as the informants for the study. The filter enabled 80.25% of all participants to be included as informants. As a minor variant, one tourist was incorporated although he/she chose 1 on the second scale; because this tourist wrote extensively about the benefits tourists could obtain from DFT in answers to open-ended questions. Generally, key informants reported that they perceived very high levels of ICT overuse among tourists and acknowledged the significance of DFT. See informants' evaluation in Table 1.

As a result, the overall sample consists of 65 key informants, including 46 tourists (66.2%), six DFT operators (9.2%) and 16 tourism and ICT scholars (24.6%) from 11 countries. Sample sizes of this scale that are knowledgeable, international and diverse, are commonly viewed as appropriate for eliciting insights in less well-studied tourism areas (De Crop, 2004). See profile of the sample in Table 2.

Tourist informants were asked to select level of habitual ICT dependence and travel experience on seven-point scales. Specifically, 9.3% of the tourist informants reported that they were addictive to ICT; 65.2% used ICT at high or very high levels; 16.3% used ICT at a moderate level; and the other 9.3% reported low or very low levels of ICT adoption. As for travel experience, 51.2% of the 65 informants were highly or very highly experienced tourists; 30.2% were moderately experienced in travelling; and the other 18.7% reported they were at low or very low levels of travel experience.

Study instruments

The study tool was designed for the purpose of obtaining rich, complete and comprehensive information about the subject of DFT. The practical way to involve international informants is to access them online. Therefore, a questionnaire that could effectively encourage informants to think and respond freely, was used. The major sections of the questionnaire included four DFT scenarios and five open-ended questions.

Four DFT scenarios were presented to informants to provoke their thoughts about holiday situations involving disconnection from internet and electronic devices. Scenarios, as narrative descriptions of plausible future situations, have been widely applied to review strategic plans, shape development decisions and foster better designs for human experiences (Hertzum, 2003). The scenarios technique was employed to facilitate effective communication between informants and researchers to permit common comprehension of the contexts. Scenarios can also help informants to think actively and thoroughly to figure out their underlying knowledge and ideas about the central subject under study (DeWeerd, 1974).

Four distinct DFT scenarios were constructed based on actual DFT episodes that were reported in news stories and travel dairies. These scenarios differ, in terms of characteristics of digital-free environments; travel themes; and tourists' attributes. The four scenarios covered natural and built environments; include themes of sightseeing, cultural tourism, holidaying and recreation; incorporated solo traveller, group traveller; exemplified tourists of either gender, different ages, and various social status.

Scenario 1 presented a group of young adults travelling through Thailand without using internet or digital devices. Scenario 2 described businessmen tired of being always online; and therefore, holidaying at a luxury resort that provides digital-detox space in

Table 1
Distribution of informants' evaluation on tourists' ICT overuse; and the significance of DFT.

How common is ICT overuse	Frequency (%), N = 65	How much can DFT benefit tourists?	Frequency (%), N = 65
1-Very uncommon	0	1-None at all	1 (1.5%)
2-Neither common nor uncommon	3 (4.6%)	2-A little	3 (4.6%)
3-Somewhat common	18 (27.7%)	3-A moderate amount	18 (27.7%)
4-Very common	44 (67.7%)	4-A lot	27 (41.5%)
		5-A great deal	16 (24.6%)
Median (SD)	**4.00 (0.57)**		**4.00 (0.911)**

Table 2
Profile of key-informant sample.

Subtotal (N = 65)	
DFT tourists	43 (66.2%)
DFT operators	6 (9.2%)
Tourism and ICT academics	16 (24.6%)
Gender (N = 65)	
Male	31 (47.7%)
Female	34 (52.3%)
Living and working location (N = 65)	
USA and Canada	26 (40%)
European countries (UK, Bulgaria, Spain)	15 (23.1%)
Australia and New Zealand	14 (21.5%)
Africa	2 (3.1%)
Asian countries (China, Indonesia, Japan)	8 (12.3%)
Tourists and DFT operators' age (N = 49)	
Under 24	21 (42.9%)
25–44	16 (32.7%)
45–64	9 (18.4%)
65 or above	3 (6.1%)

the form of a well-being retreat. Scenario 3 was about family travels in nature-based environments in which outdoor activities and adventures were involved. Scenario 4 introduced a remote European historic village that tourists visited in the pursuit of both authentic heritage and building personal well-being. The scenarios were used entirely as prompts to stimulate the informants' orientation to the topic.

Five open-ended questions were used to encourage tourist informants to write about their personal experiences; DFT providers to report their observations of tourists' experience and judgement of tourists' welfare; academics to present their perspectives of DFT's value for tourists. The questions were designed to provoke to think and write progressively; the overlapping and repetitiveness across questions does not influence results.

The topics of these five open-ended questions were the same for different groups of informants; but they were posed in slightly different ways to ensure that the answers focused on DFT value for tourists. The questions for tourists were “Please describe your experience of the digital-free holiday circumstances where you TEMPORARILY chose to switch off digital devices, stayed in a disconnected environment (including accommodations) or unexpectedly lost mobile reception and internet connection”, “What personal characteristics and individual qualities do you think you need to cope with digital-free situations?”, “Please think of the benefits you personally have got from having some digital down time on holidays; and the impacts on your families, friends and colleagues”, “Please think of in what ways digital-free tourism experience could help with your self-growth and post-trip wellbeing”, “Please write down your any other ideas or stories about digital-free tourism if you have”. The questions for providers and academics asked about the same topics but were slightly modified. For example, DFT providers and IT/tourism academics were asked: “What personal characteristics and individual qualities do you think the tourists need to cope with digital-free situations?” and “Please think of the benefits tourists would get from having some digital down time on holidays; and the impacts on their families, friends and colleagues.”

Data analysis

Deductive coding approaches were utilised to analyse the textual data drawn from key informants' responses to the open questions. The goals were to explore the potential links between DFT and character strengths; and compare the views of subgroups of tourists, providers and academics. We focused on what character strengths tourists (potentially) use or build in response to the requirement of DFT environments. The conceptual driving, activating, reinforcing framework in Fig. 1 structured the coding procedure.

The responses to all five questions were initially merged to obtain rich information. Material was then categorised into content about different stages of travelling, namely pre-travel, during-travel and post-travel. Next, template coding method was utilised to exhaustively code the content about character strengths. Template analyses are characterised by a priori (semi-)structured codebooks established for in-depth analysis. Such coding templates are usually constructed based on research questions, hypotheses, conceptual/theoretical understandings, or preliminary text exploration (Waring & Wainwright, 2008). The catalogue of twenty four character strengths was employed in the current study as an a priori, template-style, coding scheme.

Before coding, the three researchers had extensive discussion about the work by Peterson and Seligman (2004). Two researchers

then closely read the key informants' written paragraphs. Coded units ranged from a word to a sentence wherever a meaningful resemblance to character strength(s) was identified. The starting point of the coding scheme was the strength names and their obvious synonyms as presented in Peterson and Seligman's classification. Moreover, the behavioural trends in descriptions that reflected the strength of interest were also coded to capture the ways informants described various strengths in DFT situations. Examples drawn from these data are as follow: "*Abilities to communicate and form real personal relationships with others*" (Tourist 3), "*Kids learn better how to socialise, and I will need to develop communication skills to interact with local people*" (Tourist 23) and "*Socialisation, communication skills, and teamworking*" (Academic 4) (all coded as Social Intelligence); "*Being without technology on holiday would really show you how little you actually need to be dependent on technology*" (Provider 2), "*It may teach us what really is important in our life, and I learnt was that I do not have to compare myself to others on Instagram*" (Tourist 31) (all coded as Perspective).

Analysis of the links between DFT and development of tourists' character strengths was conducted based on the frequency and repetitiveness of each strength code. Specifically, the frequency of each character strength can be represented by the number of key informants who referred to this strength in their answers. Repetitiveness is defined by the median number of times that a strength appeared in each key informant's response. The values for frequency and repetitiveness can be seen in Table 4 in the following section of results.

Additionally, consistency between the first author's coding at two different times; a checking between the first two authors; and an inter-coder assessment with a third researcher ensured the reliability of the coding. Inter-coder reliability was confirmed by the high level of category agreements (CA) between two coders across all the 24 strengths. Specifically, 7 questionnaires were randomly drawn from the 65 valid surveys (10.8%) which contained 4243 words (21.1% of the total word counts). The third researcher coded written answers related to character strengths in these seven questionnaires. The index of concordance was computed to estimate the category agreements by the formula: CA = 2 × number of agreements between coders / [Number of Coder A's codes + Number of Coder B's codes]. The category agreements ranged between 75% and 92% with the overall CA of 82.2% which indicates high consistency and reliability (Schultheiss & Brunstein, 2001, 75) (Table 3).

Results

Overall frequency and repetitiveness of comments for strengths

At first, we listed the core character strengths developed in DFT by viewing the distribution of the 24 character strengths from the responses of all 65 informants. Inter-group confirmation for the golden evidence triangle and nuanced comparison followed the overview.

The informants' responses varied greatly in length, from 24 words to 1235 words. The median was 220 words (SD = 257.3). Twenty three character strengths appeared in the informants' report of DFT circumstances. Leadership was not identified as a relevant character strength in the study. The median number of strengths that each key informant referred to was 13 (SD = 3.61).

The values for frequency and repetitiveness, and brief descriptions of the twenty four character strengths defined in positive psychology are displayed in Table 4.

The character strengths with a frequency above 35 (the median), were marked as high frequency while others (below 35) were designated as low frequency groups. The strengths were also marked as high-repetitiveness (repetitiveness being twice or more), moderate-repetitiveness (once) and low-repetitiveness (less than once). Based on the assigned levels of frequency and repetitiveness, the character strengths were categorised into three groups: core, secondary and peripheral. Fig. 3 represents the paths for forming groups. The three-layer tiered model in Fig. 4 was drawn to visualise the relative importance of different character strengths that were underpinned by their frequency and repetitiveness.

DFT-strengths verified by triangulation

The particular character strengths referred to by each group, the strength's frequency among a group, and the themes characterising routine life and DFT environmental perceptions across the travel stages are shown in Table 5.

Nine out of the twenty three strengths were commonly acknowledged by all three groups. In the order of the ranking of prevalence and repetitiveness, the strengths confirmed to be closely related to DFT include: four of the character strengths in the core

Table 3
Inter-coder category agreements.

Sample	Number of Coder A's codes	Number of Coder B's codes	Number of agreements	CA
1	71	65	52	76.5%
2	50	46	36	75.0%
3	67	64	57	87.0%
4	25	25	23	92.0%
5	45	43	36	81.8%
6	53	50	43	83.5%
7	26	27	23	86.8%
Overall	337	320	270	**82.2%**

Table 4
Prevalence and repetitiveness of comments for character strengths in DFT descriptions.

Names of character strengths	Brief description	Prevalence of the strength among informants (%) N = 65	Repetitiveness of the strengths (mean, SD)
1. Creativity	Thinking and doing in original and ingenious ways.	9 (13.8%)	0 (0.15, 0.40)
2. Curiosity	Being interested in exploring and discovering fascination and novelty.	47 (72.3%)	1 (2.14, 2.38)
3. Open-mindedness	Being open to any rational possibilities without bias, discrimination or paradigm limiting mindset.	52 (80%)	2 (2.46, 2.48)
4. Love of learning	Being enthusiastic about new knowledge, skills and topics.	34 (52.3%)	1 (1.18, 1.77)
5. Perspective	Assessing things, judging situations and commenting wisely in relation to everything else.	46 (70.8%)	1 (1.43, 1.39)
6. Bravery	Being physically and mentally free from fear to deal with threats, dangers, challenges and difficulties.	43 (66.2%)	1 (1.51, 1.88)
7. Persistence	Sticking to plans and goals; never giving up easily.	35 (53.8%)	1 (1.84, 1.79)
8. Integrity	Being honest to others and oneself; presenting authentic feelings, ideas and attitudes.	38 (58.5%)	1 (1.37, 1.88)
9. Vitality	Being full of vigour and energy; doing things actively.	50 (76.9%)	1 (2.09, 2.16)
10. Love	Liking and caring others; valuing the importance others; being close to people.	46 (70.8%)	1 (1.46, 1.48)
11. Kindness	Doing favours for others; providing benefits to others.	11 (16.9%)	0 (0.23, 0.53)
12. Social intelligence	Being able to comprehend feelings, thoughts and behaviours of others and oneself; interacting with people in mutually beneficial ways in different situations.	57 (87.7%)	2 (3.51, 3.24)
13. Citizenship	Contributing to a group as a member; doing one's share.	12 (18.5%)	0 (0.40, 1.28)
14. Fairness	Treating all people equally without discrimination; offering everyone a fair chance.	2 (3.1%)	0 (0.03, 1.17)
15. Leadership	Capacity to take the charge of a team; being able to managing personnel, organising activities and regulating teamwork.	0	×
16. Forgiveness and mercy	Understanding and accepting others' shortcomings; permitting mistakes; giving others chances to mend and improve.	4 (6.2%)	0 (0.06, 0.24)
17. Humility/modesty	Not showing off one's abilities, capacities or accomplishments; not thinking of oneself outstanding.	2 (3.1%)	0 (0.03, 0.17)
18. Prudence	Thinking twice before acting; being cautious in what to say and to do.	10 (15.4%)	0 (0.20, 0.51)
19 Self-regulation	Disciplining oneself; controlling one's behaviours, emotions and focus.	60 (92.3%)	3 (4.12, 3.32)
20. Appreciation of beauty and excellence	Noticing, praising and enjoying the wonders of nature, people, events and experiences.	59 (90.8%)	2 (3.17, 2.39)
21. Gratitude	Finding out what is good for oneself; acknowledging and expressing thankfulness.	24 (36.9%)	0 (0.54, 0.95)
22. Hope	Believing in the brightness of the future; being optimistic and willing to work to make good things happen.	36 (55.4%)	1 (1.05, 1.44)
23. Humour	Enjoying laughing and making jokes; not taking all of life too seriously.	1 (1.5%)	0 (0.02, 0.12)
24. Spirituality	Having beliefs about the higher meaning and purpose of the universe that individuals should respect and act accordingly for harmony.	28 (43.1%)	0 (0.74, 1.20)
Median (SD)		**35.50 (20.93)**	

layer (self-regulation, appreciation of beauty and excellence, social intelligence and open-mindedness); three in the secondary layer (vitality, love and perspective) and two in the peripheral layer (spirituality and creativity). Fig. 5 displays the distributions of the nine verified character strengths on the tiered importance model.

In addition, six of the nine verified strengths were referred to by informants when discussing DFT across the three travel stages. The strength labelled perspective only appeared at the decision making stage and after the trip; spirituality was not used for pre-travel stage but was important for the experience both during and after travel; the strength of creativity was highlighted for on-site DFT situations but did not appear in the content for pre- or post- travel stages.

Differing views among DFT tourists, DFT providers and tourism/IT academics

Based on the differences among the three subgroups, the twenty three character strengths used by key informants were categorised into five groups. In addition to the commonly acknowledged nine character strengths, which comprise the tiered model in Fig. 5, there are another four groups. The array of these particular character strengths is documented in Table 6.

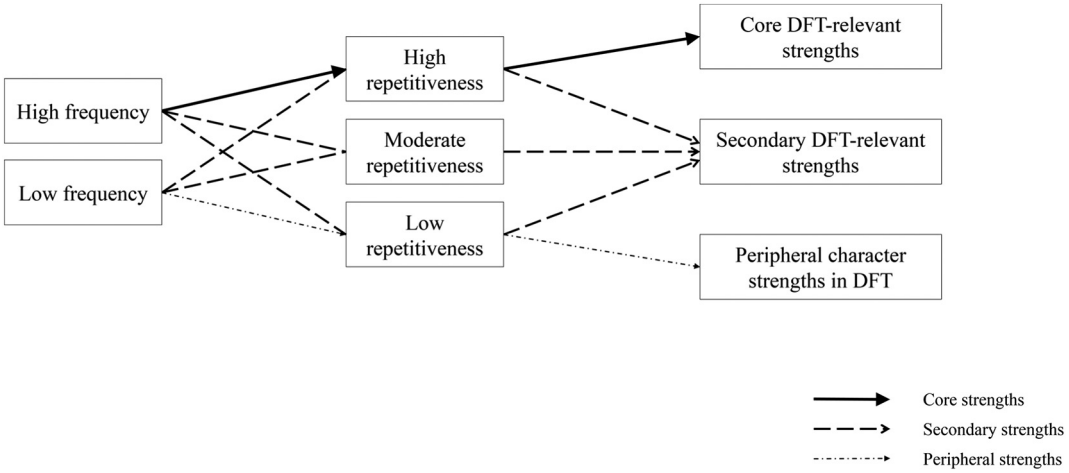

Fig. 3. Clustering paths for varied groups of character strengths.

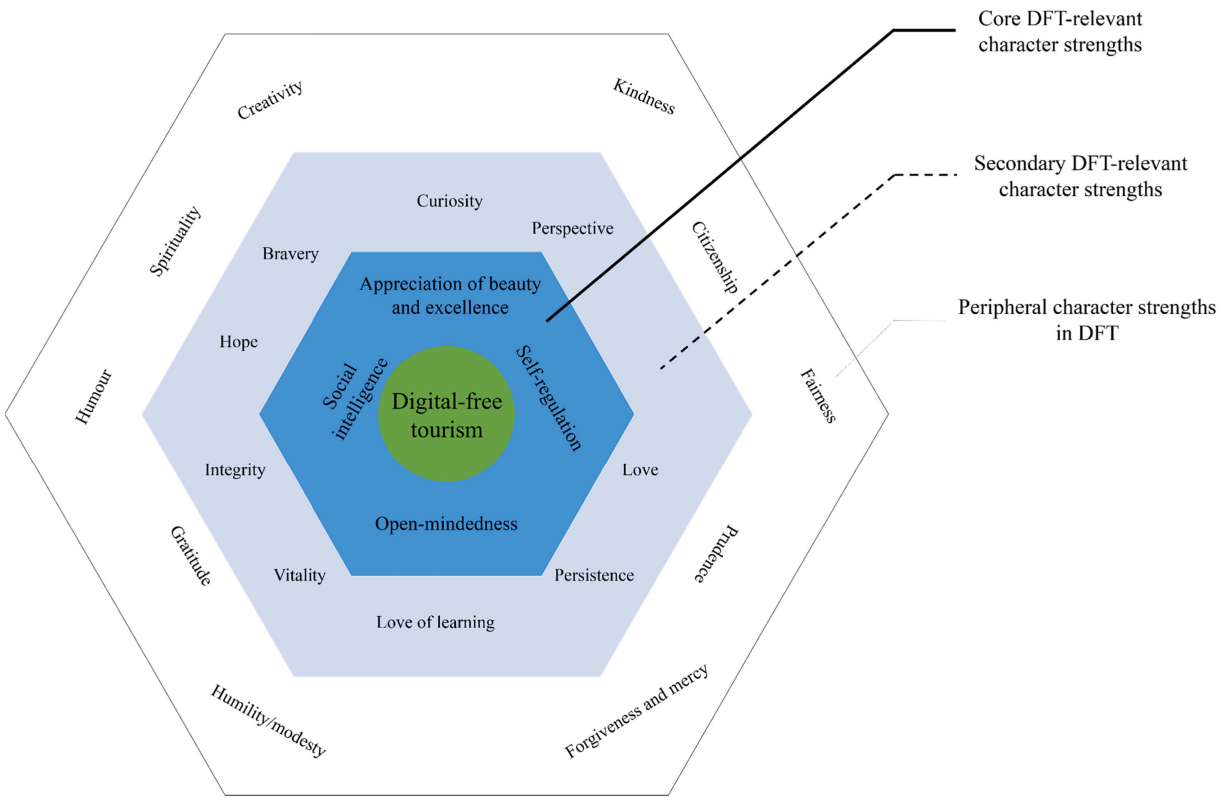

Fig. 4. The core-periphery model of digital-free tourism-relevant character strengths.

Discussion and conclusions

Twenty three out of all the twenty four character strengths defined in positive psychology (leadership was not mentioned), were perceived to be required, utilised or enhanced in DFT situations. These DFT-relevant strengths were distributed on a core-secondary-peripheral tiered model based on their relative importance that was determined by both frequency and repetitiveness of the strength in informants' responses. Furthermore, a golden evidence triangle was established by bringing together the commonalities of tourists', providers' and academics' perspectives. The linkages of nine character strengths to DFT were verified by this triangulation with high levels of trustworthiness. They are: self-regulation, appreciation of beauty and excellence, social intelligence and open-mindedness on the core layer; vitality, love and perspective on the secondary layer; spirituality and creativity on the peripheral payer.

We argue that these nine important strengths that are required, utilised and practised in DFT can be developed through coping

Table 5
Inter-group and inter-stage comparison and themes of DFT environmental perceptions.

	Pre-travel	During travel	Post-travel
Character strengths referred to by DFT tourists (Prevalence)	Self-regulation (40), appreciation of beauty and excellence (38), social intelligence (42), open-mindedness (19), curiosity (29), perspective (21), integrity (6), bravery (7), love of learning (7).	Self-regulation (40), appreciation of beauty and excellence (29), social intelligence (39), open-mindedness (7), vitality (30), curiosity (14), love (16), bravery (43), persistence (35), hope (2), love of learning (26), spirituality (14), citizenship (8), kindness (8), creativity (3), humility/modesty (1).	Self-regulation (40), appreciation of beauty and excellence (11), social intelligence (43), open-mindedness (31), vitality (16), love (28), perspective (9), integrity (26), hope (27), spirituality (11), gratitude (22), forgiveness and mercy (4), humility/modesty (2), fairness (2).
Character strengths referred to by tourism and IT academics	Self-regulation (12), appreciation of beauty and excellence (12), social intelligence (7), open-mindedness (15), curiosity (10), perspective (16), integrity (10), love of learning (3).	Self-regulation (16), appreciation of beauty and excellence (15), social intelligence (10), open-mindedness (9), vitality (11), curiosity (5), love (5), hope (4), love of learning (5), spirituality (6), kindness (3), creativity (2), prudence (7), humour (1).	Self-regulation (13), appreciation of beauty and excellence (7), social intelligence (6), open-mindedness (16), love (4), perspective (11), integrity (6), hope (8), prudence (6).
Character strengths referred to by DFT providers	Self-regulation (2), appreciation of beauty and excellence (6), vitality (4), love (1).	Self-regulation (4), appreciation of beauty and excellence (6), social intelligence (4), vitality (4), spirituality (4), citizenship (4), creativity (4).	Self-regulation (4), social intelligence (4), vitality (4), perspective (1), spirituality (2), gratitude (2), citizenship (1).

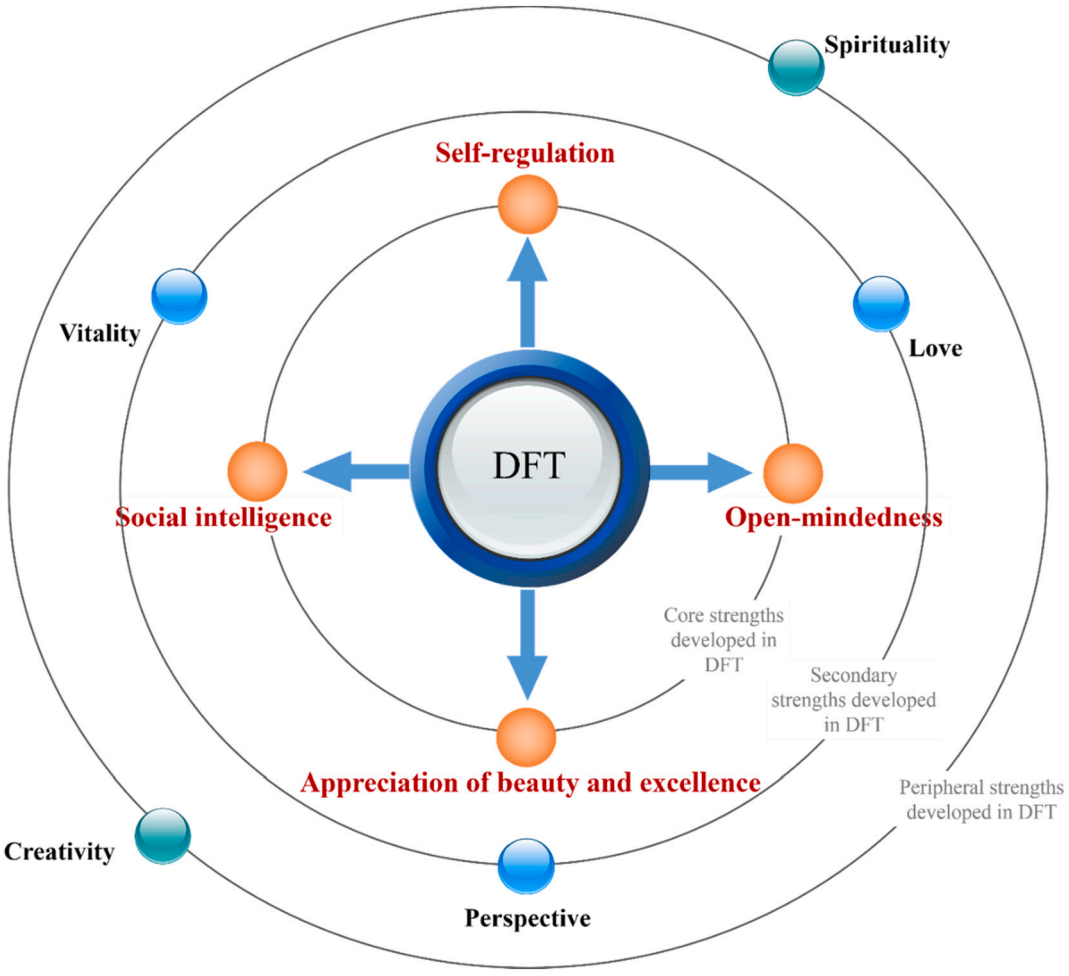

Fig. 5. The core-periphery model of character strengths developed in DFT confirmed by four information sources.

Table 6
Differences among the views of DFT tourists, tourism/IT academics and DFT providers.

Golden evidence triangle (9)		Tourists' special emphasis (4)		Academics' special emphasis (2)		Providers' special emphasis (0)		Acknowledged by providers and tourists (2)		Acknowledged by providers and academics (0)		Acknowledged by tourists and academics (6)	
Tourists	√	Tourists	√	Tourists	×	Tourists	×	Tourists	√	Tourists	×	Tourists	√
Academics	√	Academics	×	Academics	√	Academics	×	Academics	×	Academics	√	Academics	√
Providers	√	Providers	×	Providers	×	Providers	√	Providers	√	Providers	√	Providers	×
Self-regulation, appreciation of beauty and excellence, social intelligence, open-mindedness, vitality, love, perspective, spirituality, creativity.		Bravery, persistence, forgiveness and mercy, fairness.		Prudence, humour.				Gratitude, Citizenship.				Curiosity, integrity, hope, love of learning, kindness, humanity/ modesty.	

√ means that significance of the strength was acknowledged by certain informants.
× means that the strength was missing from certain informants' evaluation.

with disconnected tourism situations. The pathways for development of the strengths in DFT include: coping with challenges, adapting to extraordinary or changing environments, working through hardship and challenging situations, engaging fully with the present, undertaking activities which fit with one's values, and building autonomy, competence, and relationships (Fredrickson, 2004; Waterman, 1993).

The process of developing character strengths in DFT situations can be captured in a three-stage travel narrative. The strengths of self-regulation, appreciation of beauty and excellence, social intelligence and open-mindedness, vitality, and love were applied in various ways before, during and after the trips. The role of perspective as a strength was highlighted for decision making and impacts on post-travel conditions; spirituality for on-site experience and psychological state after travel; and creativity for on-site DFT situations.

Roles of verified strengths in DFT

Self-regulation. The roles of self-regulation can be understood in both psychological and behavioural senses. As noted in previous literature, tourists could not achieve psychological sustainability through digital detoxing unless being "mental away" is aligned with being "physical away" (Floros et al., 2019). The changes of DFT tourists' emotion are depicted in existing research, from withdrawal symptoms, such as anxiety, frustration, and loneliness, to enjoyment (Cai et al., 2019; Chen et al., 2018). In our study, such processes of adaption and acceptance were also reported by informants. For example, the owner of a digital-detox Airbnb observed that: "While they (customers) were anxious at first about separating from their phones, it took less than 24 hours for the positive changes to occur". Moreover, how the strength of regulating emotions worked to help tourists adapt to DFT and enjoy the peace was identified in tourists' responses. For example, a Chinese tourist who spent a week-long holiday at a Zen retreat centre wrote: "At the beginning, I was worried about missing out on messages and emails but thought of my phone less and less after reminding myself to relax, calm down". In addition, the strength developed in DFT continues to function after travel; one parent wrote: "We found our kids were not as restless as when they were previously deprived of phones and IPads; they learned to regulate their emotion through the digital-detoxing."

In a behavioural sense, most informants listed "self-regulation" and "self-control" as the traits that were both needed and improved in DFT. For example, a provider wrote about DFT tourists as: "They can control themselves, it is about them not using smartphones." Furthermore, the contributions of improved self-regulation to post-travel life were confirmed by tourists' comments, such as: "It helps to grow yourself in self-control", "(post-trip) less urgency to connect."

Appreciation and spirituality

Appreciation of beauty and excellence is another character strength appearing across the three travel stages. In line with previous study of DFT motivations (Egger et al., 2020), natural scenery is the principle appeal for DFT tourists. DFT tourists were described by academics as: "They also need to have a minimum level of interest in nature", "Loving nature matters: people who are willing to explore and be close to the nature."

Tourist gaze in DFT is shifted from electronic screens to the real-world circumstances, which is consistent with existing literature (Cai et al., 2019). Tourists wrote: "Nothing beats total silence, star gazing, nature walks, or observing birds in a national park." As a result, tourists' appreciation of beauty is enhanced. Informants perceived the sharpened senses of seeing, smelling, hearing and touching in DFT. For example, tourists wrote: "I was also able to appreciate nature, lying on the grass looking at the trees, appreciating the sound of waves, sunrise, and fresh air". After travel, some tourists retain the strength of appreciating natural beauty. A tourist wrote: "I seemed too busy to find the beauty of surroundings; but now I can spend a whole day in my garden, listening to the birds singing, seeing the flowers…".

The reported passion for nature in DFT is identified as a contributor to destination immersion, in addition to the socialisation related factors investigated in previous research (Fan et al., 2019). A tourist wrote: "I find this is best when you are immersed in nature, away from the hustle and bustle of our 21st century lives where an IPhone is always within reach!"

Moreover, the DFT experience has potential for reminding tourists to appreciate the excellence of life and enjoy others. Providers wrote: "They will appreciate the beauty of the nature and the time spent with their families"; tourists commented "We spend more time on appreciating our friendship"; and academics highlighted the same perspective, "More appreciation for their quality of life".

Another strength underpinning the virtue of transcendence- spirituality- is also developed in DFT, which is parallel to the findings about Dutch vacationers (Hoving, 2017). Some tourists reported that they heard their inner voices, found their true selves, achieved better understanding of life's meanings, realised the scale of humans in contrast to the vast universe. A tourist wrote: "For many health and well-being attributes, mind body and soul, you don't need digital devices, freedom from them allows people to connect with themselves, the people around them and the universe, not the devices". Academics believe that such transcendence happening in DFT has profound meanings for the participants' future lives. They suggested "It may teach us what really is important in our life, what we can do by ourselves without the internet, and how to enjoy life."

Social intelligence and love

The strength of social intelligence was highlighted in informants' discourses about DFT. Most tourists, providers and academics mentioned that compared with communication online, face-to-face communication in DFT involved greater focus, extended exchanges, vivid gestures, additional eye contact, and subtle changes in tone and voice. For example, a tourist wrote "If people are travelling in groups, they can communicate more deeply and listen to the voices from each other's hearts when they discard the

electronic devices that limit the immediacy of group communication."

Moreover, informants frequently expressed their concerns over the degeneration of valuable social abilities in the digital era, such as the ability to start conversations, approach strangers, and enter a group. An academic wrote: "Social media and other uses of IPads and smartphones are killing people's abilities to communicate and form real personal relationships with others." A tourist wrote "You just need to know how to communicate, as nowadays people forget how to talk with others in person, without emoji." Such contemporary concerns were also revealed in previous research (Harwood, Dooley, Scott, & Joiner, 2014; Kirillova & Wang, 2016).

Most informants acknowledged the powerfulness of DFT in developing social intelligence due to the enormous opportunities for learning and practising inter-personal skills, just as other studies have asserted (Egger et al., 2020; Fan et al., 2019). Academics in our study provided insightful comments: "They will realize that life is not only about reaching goals, but also how to reach goals by way of togetherness, with all group members learning the process and the meaning of positive values in society like struggle, hard work, empathy, and cooperation." "They will gather insights to help redefine their social interaction when they return from this kind holiday."

The significance of face-to-face communications, personal interactions, and group engagement characterising DFT were particularly stressed for young generations (Floros et al., 2019). For example, a tourist wrote: "More focus on the here and now, more attention to friends and family that are in the room, kids learn better how to socialize."

Additionally, the strength of love, which is crucial for psychological satisfaction, may follow the closer relationships. For example, a tourist noted: "(DFT) develop more positive emotions-like feeling loved and supported."

Open-mindedness, creativity, and perspective

The strength of open-mindedness can be displayed, acquired and practised in DFT. DFT tourists were described as adventurous people who were open to accept various ways of being, living and travelling. There are plenty of opportunities in tourism, especially DFT, for broadening horizons, expanding experience, learning and building skills, and connecting with different people (cf. Uysal et al., 2016). The lack of easy access to on-line information encourages tourists to explore unfamiliar destinations more thoroughly. As a result, new knowledge about unfamiliar places is obtained. A tourist wrote: "I needed to talk with locals and ask them about attractions here; surprisingly I arrived at destinations and places that I was not aware of and that can be visited." An academic thought DFT was about "Learning and discovering cultures, skills, people". The expanded interest in destinations and increased fascination together contribute to tourists' perception of restoration (Lehto, 2013).

Creativity is a necessary strength for on-site DFT experience. Tourists must forge multiple solutions to difficulties and find new ways of entertaining themselves. The value of DFT in developing open-mindedness and creativity was stressed for young people. For example, a tourist wrote: "I think digital-free tourism is especially needed for younger generations and children…Teaching young people that you can find other ways to live your life other than through a screen is valuable", "It is important to understand the cause of boredom with children - if they are wanting more stimulation then instead of engaging with a screen, they can go explore, learn new things, and experience new activities and cultures while on holiday in a diverse and unfamiliar destination."

The development of the strength of perspective is represented by tourists' evaluations of DFT and technology (Cai et al., 2019). Firstly, DFT tourists need to be insightful to assess the possible tensions and benefits of disconnection and their capacities to deal with DFT. Secondly, many tourists re-evaluated their habitual behaviours of using technology and reflected on human-technology relationships after travel. A tourist wrote: "Being without technology on holiday would really show you how little you actually need to be dependent on technology." Furthermore, new views of self-worth and identity were recorded. "Self-worth… I learnt this, it meant not having to compare myself to others on Instagram".

Vitality

Tourists reported higher levels of physical and psychological vitality in DFT and post-travel routines. The time spent on digital devices is reduced in DFT; and therefore, tourists tend to participate in alternative activities, such as "outdoor sports", "group games", and "planting". Such engaging activities are important for relaxation, restoration and balancing work tasks and life (Kirillova & Wang, 2016; Chen et al., 2018). The enhancement of sustainability was confirmed by tourists' comments, such as "I could foster my mental well-being and energize my body". In particular, in line with the findings from previous research (Dickinson et al., 2016), encouraging children to engage in outdoor activities and teamwork is an important reason why parents, educators and academics endorse DFT. An academic wrote: "The results of participating in such a process not only builds cognitive skills, but also activity routines (relating to muscular movement) and affective components (relating to moods, feelings, and attitudes). Hence, it will provide deeper and more personal impressions about what they have learned, and stimulate consciousness of social values for self-growth and post trip wellbeing."

Contributions and implications

There is much to be gained by linking DFT studies to the well-developed concepts in positive psychology. Firstly, we contribute to knowledge about DFT by outlining the mechanisms for building positive personal traits. Understanding such self-development outcomes extends investigations about the DFT experience, from motivations and emotional responses to long-term and fundamental impacts with links to the broader leisure, psychology and sociology literature. Arguably, DFT has the potential to provide restorative and transformative tourist experience; therefore, our findings can shed light on studies of transformational experiences and restorative destinations (Kirillova et al., 2017; Lehto, 2013). Secondly, the identified potential of DFT in developing character strengths contributes to the literature in positive psychology by offering an alternative method for promoting positive emotions and

psychological resilience. There are also interesting possibilities to link the work on coping with DFT to the tradition of exploring the value of perseverance in studies documenting success built on the concept of grit (Credé, Tynan, & Harms, 2017). Additionally, it has been established in previous positive psychology literature that development of character strengths contributes to tourists' well-being and improves individuals' quality-of-life (Park et al., 2004; Peterson et al., 2007). Therefore, research on DFT benefits also contributes to the literature on well-being and quality-of-life by providing potential pathways for living a good life.

As our knowledge of the DFT benefits is built, we can begin to foreshadow practical implications in suggesting the appeal of this form of tourism. The future implications of our findings lie in three directions: firstly, reminding technology users of the significance of regulating habits of using digital devices in leisure time; secondly, informing tourists about the possibilities of self-growth through managing technology use behaviours on travel; and thirdly, suggesting a novel style of tourism products with potential consequences for developing tourism and hospitality in remote regions.

Limitations and future study directions

The current study is a descriptive exploration of the perceived relationships between DFT and the development of character strengths and offers a basis for wider inquiries. The logic of the work was to access the views of those who see some possibilities for the value of digital-free tourism. We do not know how widespread this view is within broader samples of tourists, providers or technology personnel. The interpretation of the study must therefore be linked to the caveat that the findings apply to those with an initial sympathy for the value of the digital detox holiday. This limitation was not extended to the content of this support and so the detail in the present work should not be seen as compromised by the initial favourability characterising the sample selection.

Further research is needed to reveal more nuanced causal connections. As with many topics of interest in contemporary interactions between tourists and ICT, we do need to continue to situate the research findings in cultures and for national groups. In addition, it will be desirable to pursue longitudinal work and directly access the rising number of DFT tourists. Most people may have deepened their understanding of the value of mindful (dis-)connection in the post-COVID-19 era because quarantine imperatives and working from home have arguably rearranged work-and-life balance issues for millions of people.

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Jing Li is Associate Professor at Jinan University, Guangzhou, China. She is interested in studying the relationships between physical and digital environments, leisure and the tourism experience, and well-being.

Philip L. Pearce, Foundation Professor of Tourism at James Cook University, studies tourist behaviour and experience with recent emphases on positive psychology theories applied to emerging tourism phenomena and markets.

Hera Oktadiana is an adjunct Senior Lecturer at James Cook University. Her research interests are hospitality and tourism education, Muslim tourists and influences on destination choice.