

ISSN 0961-8309

Volume 41(1) Sept. 2020

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**An autopoietic approach to assessing the impact of TCM Qigong exercise on wellbeing:
A feasibility study**

SYSTEMIST

**Publication of
The UK Systems Society**

Published by the UK Systems Society

Registered office: Sidelands, Nutgrove Lane, Chew Magna, BRISTOL, BS40 8PU

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An autopoietic approach to assessing the impact of TCM Qigong exercise on wellbeing: A feasibility study

Abstract

Research suggests that Traditional Chinese Medicine (TCM) Qigong practice leads to stress reduction, emotion regulation and enhanced immune function. This paper presents a feasibility study of impact of a Lung Benefiting and Strengthening Qigong Exercise (健肺复原导引法) on wellbeing. A wellbeing model grounded in autopoietic theory of self-organisation in living systems is used to inform the evaluation of impact and ensure reliability of the data. More specifically, data quality is enhanced by focusing the participants' awareness on their immediate embodied experience of physical, emotional and relational wellbeing, sense of meaning, kindness, valence and activation. Statistically significant differences for physical wellbeing with a large effect size ($p=0.001$, $r=0.645$), emotional wellbeing with a large effect size ($p=0.003$, $r=0.598$), sense of connection with a large effect size ($p=0.007$, $r=0.525$), sense of meaning with a medium effect size ($p=0.013$, $r=0.475$), kindness with a medium effect size ($p=0.019$, $r=0.441$), valence with a large effect size ($p=0.002$, $r=0.600$), and a decrease in activation with a medium effect size ($p=0.020$, $r=-0.436$), were observed. It is concluded that TCM Qigong exercise may lead to positive relaxation or activation states or indeed to positive mood change that may have health benefits.

Keywords: qigong, wellbeing, self-awareness, autopoiesis, valence, activation, pyramid-K

Introduction

The feasibility study was conducted during the Covid-19 pandemic. A Lung Benefiting and Strengthening Qigong Exercise (健肺复原导引法) was offered live online through the Confucius Institute in collaboration with the Jiangxi University of Traditional *Chinese Medicine* (JUTCM), and the University of Wales Trinity Saint David as part of a series of Qigong sessions during the time of the pandemic. The Qigong practice was delivered by an experienced TCM and Qigong practitioner from Jiangxi University of Traditional *Chinese Medicine* (JUTCM). The impact was assessed by the Northumbria University Wellbeing Informatics team, with the permission of the Confucius Institute at the University of Wales Trinity Saint David. Ethics approval was granted by Northumbria University, Newcastle, UK.

The objectives of the study were twofold: - develop a method for assessing impact grounded in self-awareness suited to evaluating first person accounts of wellbeing; - apply the method to evaluate the impact of Qigong practice on wellbeing, valence and activation after the intervention, i.e. the Qigong exercise.

TCM Qigong

Qigong originated in China as a means of self-care, i.e. according to the first historical record in China “Shang Shu,” 4,000 years ago (Feng et al, 2020). The word *Qigong* consists of two Chinese characters: *Qi* and *Gong*. *Qi* is often translated to mean life energy, and *Gong* as work, and also merit (Cohen 1999). The word Qigong in this translation means working with life energy as well as the benefits one has as an outcome of Qigong practice (Cohen, 1999). Cohen (1999) suggests that a good Western definition of Qigong would refer to Qigong as a psychophysiological self-regulation (Cohen, 1999).

The above definitions are generally accepted by Western Qigong practitioners, but would benefit from a more accurate articulation of the meaning of *Qi* as the one offered by the Centre for TCM Qigong Health Studies at the Jiangxi University of Traditional *Chinese Medicine* (JUTCM):

‘The Qi of Nature 大自然的气 is invisible and the most basic form of matter which constitutes the universe and all material things. The Qi of the body 人身中的气 is kind of invisible and special substance which maintains normal human life

activities. Human life activity is the process of interaction and transformation between the Qi of the body and of nature.

TCM Qigong is based on the view of that the entirety of life may be integrated through using active introspective consciousness to exercise, transform, perfect and improve the life functions, and to make natural instinct into conscious intelligence.

The human life is a unified whole. Humans and nature are a holistic unity.

The objective of TCM Qigong practice is to transform, perfect and improve the functions of life.'

TCM Qigong Health Studies at the Jiangxi University of Traditional **Chinese Medicine**, 2020)

Research suggests that Qigong has the potential to play a role in reducing stress, emotion regulation and improvement of immune system and thus has the potential for the prevention, treatment, and rehabilitation of infections, such as COVID-19 (Pölönen et al, 2019; Wu et al, 2019).

TCM Qigong can reduce both inflammatory factors and inflammatory response and can increase the amount or activity of immune cells in the body (Irwin et al, 2012; Yeh et al, 2006). The effect of Qigong on specific immune response can be observed in the increase of immune cells and immunoglobulin (Chiang et al, 2010). Wright et al (2011) found that in swimmers who practiced Qigong at least once per week, cold and flu symptoms showed a significant nonlinear association with frequency of Qigong practice, with a strong, inverse relationship between practice frequency and symptom scores.

It is outside of the scope of this paper to provide a full review of research on Qigong benefits. The reader could refer to Feng (2020) for a comprehensive review of Qigong practice benefits.

Autopoiesis and Wellbeing

This theory of autopoiesis defines and describes the dynamics of living as an autopoietic system, i.e. a network of processes of production of components that: (i) through their interaction and transformations continuously regenerate the network of processes that produced them; and, (ii) constitute the entity as a concrete

by specifying the topological domain of its realisation as such a network (Maturana and Varela, 1980).

Autopoiesis is basic to the living individual. What happens to the individual is subservient to its autopoietic organisation, for as long as it exists the autopoietic organisation remains invariant. What this means, is that its identity, and therefore its emergent global properties, are generated through a process of self-organisation, within its network of components. However, we must also realise that this process of self-organisation is conditioned by a two-way process of local-to-global and global-to-local causation (Figure 1).

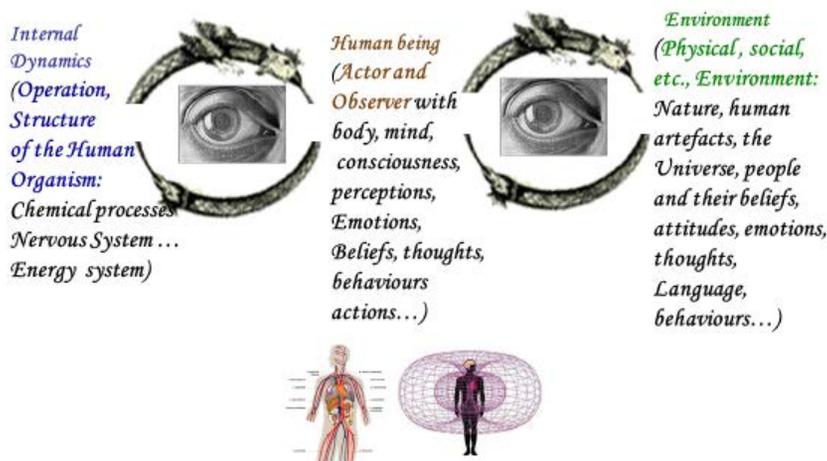


Figure 1. The Mutual Embeddedness of Component Dynamics, Autopoietic Human Entity and its Environment (image of uroboros from <http://www.enolagaia.com/UMUArchive/AT.html>; image of human form from <http://www.biofieldglobal.org/>)

First, there is the local-to-global determination ('upward' causation) through which the entity, with its properties, emerges. Secondly, however, there is global-to-local determination ('downward' causation), where global characteristics constrain or direct local interactions between the components (Varela, 1996; Varela, 1997). Thus, the internal dynamics of the components (neuronal nets, metabolic nets and so on) generate and sustain the global properties of the autopoietic entity. At the

same time, however, the global properties (body, consciousness, mind, emotion, and so on) constrain and govern the behaviour of the individual components. This dialectic relationship between local and global levels is described in autopoietic theory as ‘reciprocal causality’ (Whitaker, 1985; Varela, 1996, Varela 1997; Sice et al., 2004). For example, in organisms with a nervous system, the rules of interactions within the neuronal network are in reciprocal relationship with the overall activity of the autopoietic entity. To a very large extent, behaviour is a regulator of perception. That is to say, what the organism senses is a function of how it behaves, and how it behaves is a function of what it senses. ‘Situated behaviour’, thus, takes the form of coupling with the environment; where environmental perturbations trigger changes in the entity but do not determine them, because changes in autopoietic systems (and indeed in autonomous systems) are necessarily subservient to conservation of organisation (identity). As observers we are in a position to distinguish the structure of an autonomous system and the structure of the environment and observe them both changing in their mutual interaction. The important thing is that both the system and the environment undergo transformations through the process of coupling, referred to as ‘structural coupling’, and these transformations are determined by the structure of the transformed entity and not by the perturbation (Maturana and Varela, 1980; Sice et al., 2004). In autopoietic entities with a nervous system, the coupling with the environment constrains and governs the neural dynamics. Thus, it is clear that the mode of coupling with the environment has two complementary dimensions: first, the living entity depends on its environment and defines itself through the interactions with that environment (these interactions are of the nature of macro-physical encounters such as sensory transduction or muscle movements). Secondly, yet no less importantly, coupling is only possible because these encounters are embraced from the perspective of the global properties of the living system itself. What the autopoietic system does, due to its very mode of identity, is to constantly embrace the encounters (perturbations) with its environment and treat them from a perspective that is determined by its internal dynamics. What is meaningful to the organism is enacted from the perspective of an actively constituted identity, and thus, precisely given by its constitution as a circular process of self-production (Maturana and Varela, 1980; Sice et al., 2004). That is to say, the organism notices and acts on what is important to it, and it is this that both defines and shapes its identity.

What the autopoietic system does, due to its very mode of identity, is to constantly embrace the encounters (perturbations) with its environment and treat them from a perspective that is determined by its internal dynamics. What is meaningful to the organism is enacted from the perspective of an actively constituted embodied identity (Maturana and Varela, 1980).

The circularity cannot be said to have a starting point and an end point. Thus, we cannot ascribe causality in a linear fashion, we cannot claim exclusive determination between the operations of the living and its environment (Whitaker, 1995). This is a reciprocal circularity.

What are the implications of understanding wellbeing from the perspective of autopoiesis? It is clear from the definition of autopoiesis that, to sustain living, the network of processes of production need to be reproduced without interruption, and that the living (autopoietic) system operates as a homeostatic system. In Antonio Damasio's terms, homeostasis is the process of life regulation (Damasio, 2016). It is important to clarify here, the word 'homeostasis' is used to indicate a dynamic process of organising resources to meet internal and external demands, not as a mere tendency to static equilibrium (Sice et al., 2020). Living systems are not just a static structure. We ascribe living to them because they are dynamic. Thus, from an autopoietic perspective, the organism's wellbeing could be defined as maintaining physical, mental and relational homeostasis and meaning generation processes (Sice et al., 2020). This definition is different from the hedonic (positive feeling) (Kahneman et al, 1999) and eudemonic (positive functioning) (Keyes et al., 2002), (Ryan et al., 2001) definitions of wellbeing. However, it encompasses their meaning, within a dynamic model of being acknowledging both positive feeling and homeostatic functioning (Figure 2).

Well(being) model: Pyramid K

The irreducibility of human experience, from the duality portrayed by the embodiment and the situatedness of the human agent, cannot be underestimated when developing methodologies for enquiry and knowledge creation. *Our personal knowing of the world is our way of experiencing it, of bringing forth a world. It is personal but not private as it arises in a continuous coupling with the environment* (Varela 1997; Sice et al, 2004). What is of utmost importance, in any enquiry, is the development of a sound method of accessing and enhancing experience (Sice et al, 2004).

Awareness of experiences as they unfold includes: witnessing present moment sensations, bodily states (alert, quiet, pleasant, unpleasant), mental activity (thoughts, feelings, memory, intentions, beliefs, attitudes, etc.) and relational experience (connectedness to others, to our planet, to nature, etc.), sense of meaning and purpose (Rauch et al, 2019; Levine 2010), and compassionate attitude to self (Maturana, 2008; Siegel, 2010; Neff, 2012; Gilbert, 2017), ensuring observation nurtures wellbeing as it is carried out in a ‘gentle, kind, and compassionate way’ (Zhao, 2015). The process of self-awareness requires curious kind attitude to self-observation (Thompson and Varela, 2001, Varela et al., 2016). This requirement is embedded in the wellbeing model (‘pyramid K’) in Figure 2. This has important implications for understanding and evaluation and measurement of human experience. As the living (autopoietic) system is embodied and situated, measuring and monitoring for wellbeing, requires an enquiry into the physical, mental and relational domains, interpreted from the perspective of the living system itself (Sice et al, 2019). The model of wellbeing has previously been used in assessing the relationship between wellbeing and leadership capability (Sice et al, 2013; Koya et al, 2016), in the development of a protocol for interoceptive self-awareness in email communication (Ogwu et al, 2020), as well as in evaluating of music listening on wellbeing (Sice et al, 2020). In July 2020, the model was adopted by the Tees, Esk and Wear Valleys NHS Foundation Trust to inform the design of a staff wellbeing screening tool.

In the context of this study, the model implementation requires creating the conditions for encouraging interoception, i.e. accessing individual awareness and interpretation of personal experience in the present moment in the physical, emotional and relational domains (Price et al, 2018). The perceived benefit of this approach is collecting phenomenological data, i.e. data with immediate reference to the embodied experience, interpreted by the participants themselves (Varela, 1996; Varela et al, 2016; Sice et al, 2019). Stowell (2020) asserts that everything that “exists” is the result of personal experience, thus, a subjective (phenomenological) account shapes the experiencer’s capacity to observe and learn.

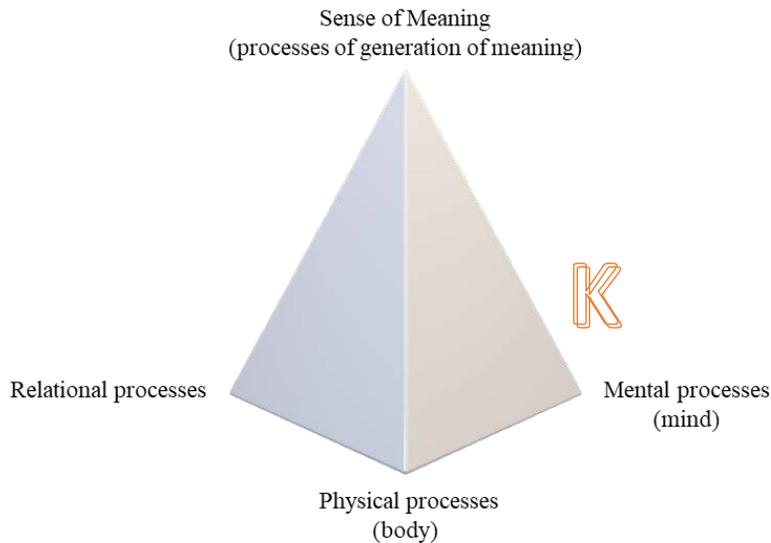


Figure 2. Dynamics of (well)-being: Pyramid K

From a perspective of autopoiesis, perception of wellbeing is a non-linear process and the interrelatedness of different aspects of wellbeing emerges in context (Sice et al, 2004). Thus, it is important to assert that the five dimensions of the K-pyramid: physical, mental, relational, kindness (love) and sense of meaning are interrelated and form an undivided whole, that we here choose to refer to as the ‘heart’ of human experience (Krajewska, 2012).

It is worth mentioning that individual awareness stemming critically from dynamic interaction between internal and external environments has recently been studied from the perspective of complex systems (Shang, 2013; Shang 2015). The focus of autopoietic enquiry is however different from most complexity studies of human systems, i.e. autopoiesis brings the individual in their interactions with the environment as a central point of exploration, in understanding the sources and dynamics of experience and the potential for expansion and evolution in the individual and social domain (Sice et al.,2004).

Methods and Data Collection

The autopoietic perspective adopted in this study, suggests that our experience of the world is born in our interactions with the environment and is validated by our embodiment. It was thus of utmost importance that the method of enquiry created conditions for paying attention and accessing immediate personal experience

through a disciplined act of cultivating capacity ‘of becoming aware’ of the sources of this experience (Depraz et al, 2003; Rauch et al, 2019). Thus, a diary method was considered appropriate for this study (Bartlett and Milligan, 2015; McDuff et al , 2012; Pavel et al, 2011). It was designed to collect both quantitative and qualitative data. The quantitative data consisted of participants rating their own interpretation of their experience of wellbeing, before and after Qigong exercise. The diary required the participant to reflect on their present experience, rating their perception of wellbeing according to the five dimensions of the wellbeing model in Figure 2 and according to valence (pleasant/unpleasant experience) and activation (excited/relaxed) on a scale from 10 to -10 accordingly (Appendix A).

The TCM Qigong exercise was delivered live online by an experienced TCM and Qigong trainer via a Zoom platform, between 2 and 3 pm (GMT) on Saturdays. Data was collected on 1st, 8th, 15th and 22th August 2020. Participants were recruited through the University of Wales Trinity St David Confucius Institute website: <https://www.uwtsd.ac.uk/online/confucius-institute-online-learning/qigong-for-health-online-courses/>. The participants were volunteers who accessed the website, became interested in Qigong, and completed the Qi exercise. Subjects were in some sense their own controls, an aspect of the study made possible by measurement “before and after” the Qigong exercise intervention.

Data analysis

Out of 28 entries by participants who engaged with the diary, 17 met the criteria of filling the diary before and after the TCM Qigong. To account for the full duration of the exercise, only corresponding entries separated by more than 25 min were considered, resulting in a total of 11 pairs of data entries.

The statistical analysis was performed using IBM SPSS Statistics software (Version 26) and Microsoft Excel - Office 365. The mean scores for five wellbeing dimensions before and after the intervention with their relative change are shown in Table 1. They are also represented in Figure 3. Consistent increase is observed for all the values, the highest being for physical wellbeing by 2.55 and the lowest for kindness by 0.73.

Table 1 Mean scores before and after the intervention.

	Before	After	Change
Physical wellbeing	0.64	3.18	2.55
Emotional wellbeing	1.64	2.73	1.09
Sense of connection	2.09	2.91	0.82
Sense of Meaning	1.82	2.91	1.09
Kindness	1.36	2.09	0.73

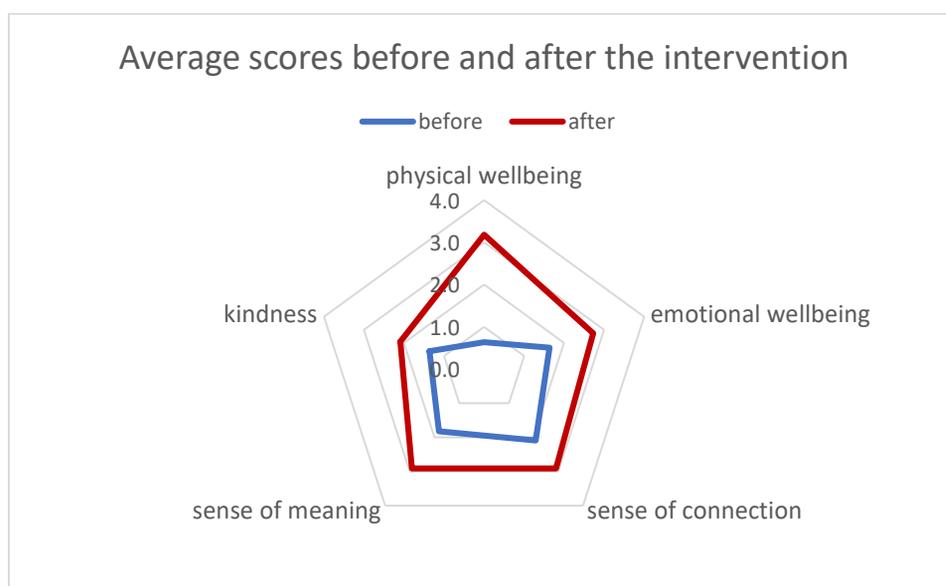


Figure 3 Mean scores before and after the intervention.

Similarly, the mean scores for valence and activation with the relative change post-intervention are presented in Table 2. Valence mean score increases significantly by 4.18 (from 1.18 to 5.36) while the activation mean decreases from 0 to -1.64. The ratings input by the participants for these two parameters before and after the exercise are shown in Figure 4. As 3 negative valence ratings are recorded pre-intervention ranging between -8 and -1, none is recorded post-intervention. The positive valence ratings are in the interval [1, 6] pre-intervention. This range increases to [2, 8] post-intervention. For the activation parameter, the pre-exercise range of [-6, 3] is decreased to [-7; 2] post-exercise; thus, indicating a lower level of activation after performing the Qigong exercise.

Table 2 Mean scores for valence and activation.

	Before	After	Change
Valence	1.18	5.36	4.18
Activation	0.00	-1.64	-1.64

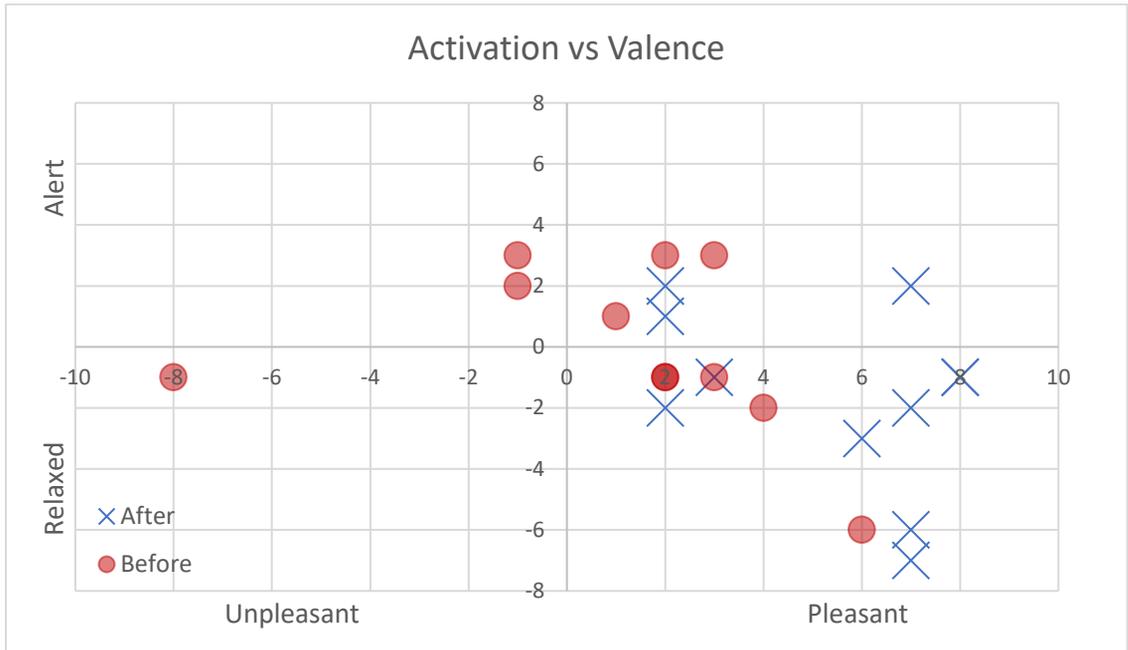


Figure 4 Valence and Activation ratings before and after the exercise.

To check whether these differences are statistically significant, the data is first tested for normality. For this purpose, the Shapiro-Wilk test is conducted. The results are shown in Table 3. Apart from valence, all p -values are less than 0.05, hence indicating non-normally distributed data. Therefore, the non-parametric Wilcoxon signed rank test is applied. As the direction of change is expected to increase for all parameters and decrease for activation, the one-tailed test is selected. The statistical significance threshold is set to $P=0.05$, and the effect size $r = Z/\sqrt{N}$ is also computed. The results are presented in Table 4.

Table 3 Shapiro-Wilk test for normality.

	Shapiro-Wilk	
	Test statistic	<i>P</i>
Physical wellbeing	0.701	<0.001
Emotional wellbeing	0.795	0.008
Sense of connection	0.822	0.018
Sense of Meaning	0.804	0.011
Kindness	0.733	0.001
Valence	0.897	0.169
Activation	0.700	<0.001

The Wilcoxon test reveals statistically significant differences for physical wellbeing with a large effect size ($P=0.001$, $r= 0.645$), emotional wellbeing with a large effect size ($P=0.003$, $r= 0.598$), sense of connection with a large effect size ($P=0.007$, $r= 0.525$), sense of meaning with a medium effect size ($P=0.013$, $r=0.475$), kindness with a medium effect size ($P=0.019$, $r=0.441$), valence with a large effect size ($P=0.002$, $r=0.600$), and a decrease in activation with a medium effect size ($P=0.020$, $r=-0.436$).

Table 4 Wilcoxon signed-rank test results including the z-score (test statistic), p-values, and effect size r. p-values less than 0.05 are in bold.

	Test statistic	<i>p</i>	<i>r</i>
Physical wellbeing	3.025	0.001	0.645
Emotional wellbeing	2.807	0.003	0.598
Sense of connection	2.460	0.007	0.525
Sense of Meaning	2.226	0.013	0.475
Kindness	2.070	0.019	0.441
Valence	2.814	0.002	0.600
Activation	-2.047	0.020	-0.436

To examine the correlations between different dimensions, Pearson correlation coefficients are used. The results are shown in Table 5. Excluding activation as it is uncorrelated or slightly negatively correlated to the other variables, the highest positive correlation is between physical wellbeing and emotional wellbeing ($\rho = 0.876$), and the lowest is between valence and sense of connection ($\rho=0.173$).

Table 5 Correlations between different dimensions.

	Physical wellbeing	Emotional wellbeing	Sense of connection	Sense of meaning	Kindness to self	Valence	Activation
Physical wellbeing	1.000	0.876	0.595	0.647	0.466	0.376	0.022
Emotional wellbeing		1.000	0.557	0.558	0.428	0.282	-0.053
Sense of connection			1.000	0.620	0.328	0.173	0.045
Sense of meaning				1.000	0.495	0.221	-0.058
Kindness					1.000	0.460	-0.375
Valence						1.000	-0.436
Activation							1.000

Each of the 4 quadrants in Figure 4 is associated with 3 emotions that users were asked to choose from after picking their coordinates in one of the quadrants. The

emotions in quadrant 1 (positive valence and activation) are: enthusiasm, motivated, stimulated. Those in quadrant 2 (negative valence and positive activation) are: angry, frustrated, anxious. In quadrant 3 (negative valence and activation), the emotions are: apathetic, inattentive, detached. In quadrant 4 (positive valence and negative activation), they are: receptive, curious, content. The number of users displaying each emotion is computed before and after the intervention. The results are presented in Figure 5. No emotion associated with a negative valence is displayed after the intervention, while, angry, frustrated, anxious and inattentive were selected before the exercise. The most frequent emotions both pre- and post-intervention are: receptive, content and curious. All positive emotions exhibited an increase after the exercise except enthusiastic that kept the same frequency. The net rate of promotion in emotion reaches $16/18=88.8\%$ in terms of frequency.

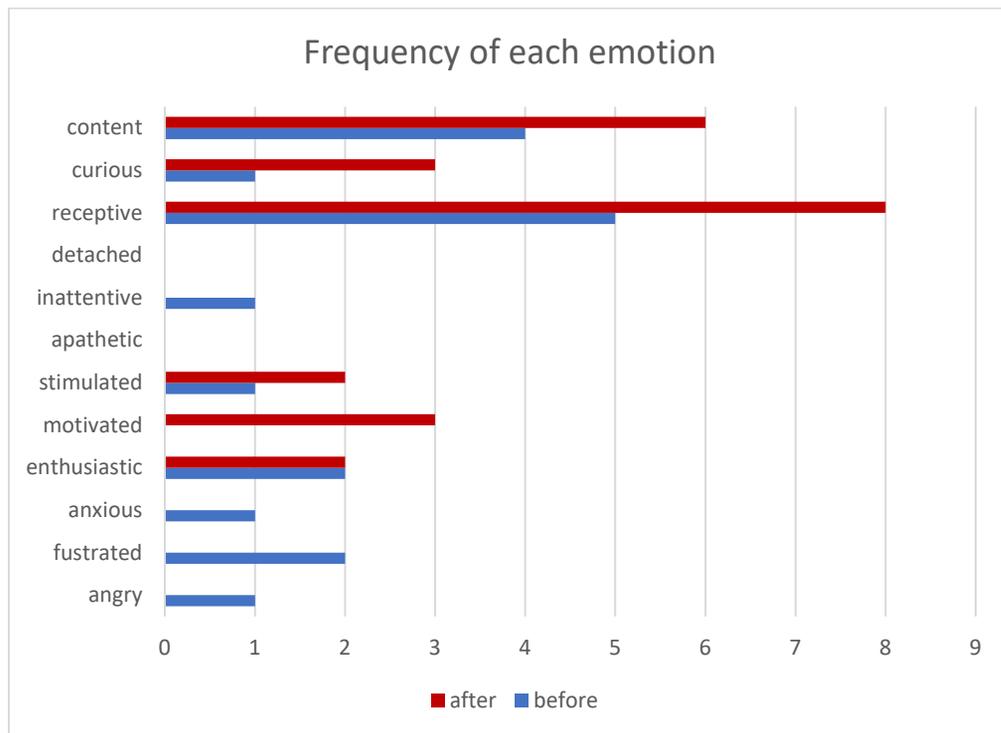


Figure 5 Frequency of each emotion before and after the intervention

Although participants were asked to leave comments if they chose to, very few comments were entered.

Discussion and Conclusion

In this study, awareness of body and mind was built in the design of the wellbeing diary. The design was informed by the ‘pyramid K’ model, focusing and enhancing participants awareness of bodily sensations, emotions and the level of pleasure/displeasure and activation/relaxation. The results suggest, TCM Qigong exercise had a significant positive effect on wellbeing: physical wellbeing with a large effect size ($P=0.001$, $r=0.645$), emotional wellbeing with a large effect size ($P=0.003$, $r=0.598$), sense of connection with a large effect size ($P=0.007$, $r=0.525$), sense of meaning with a medium effect size ($P=0.013$, $r=0.475$), kindness with a medium effect size ($P=0.019$, $r=0.441$), valence with a large effect size ($P=0.002$, $r=0.600$), and a decrease in activation with a medium effect size ($P=0.020$, $r=-0.436$).

It is important to communicate the high correlation (Pearson coefficient = 0.876) between changes in emotional and physical wellbeing (Table 5) thus acknowledging the close interrelatedness between the emotional and physiological aspects of wellbeing. Thus, we conclude that further research into the health benefits of TCM *Lung Benefiting and Strengthening Qigong Exercise* (健肺复原导引法) is applicable.

It would be beneficial to update the online interface taking into account the context application in shaping the requirements, (Bednar and Welch, 2009) and thus to encourage participants to engage and leave richer comments and reflections on their experience. Further research will require a larger number of participants, a control group and a randomized sample, relevant demographic data collection. Future research would benefit from introducing psychophysiological measurement such as Heart Rate Variability, to provide a valuable link between the human actor and objective physiology (Porges, 2009; Sice et al, 2019; Rauch, 2020).

Limitations

This was a study conducted during the time of the Covid-19 pandemic which presents several limitations that need to be addressed in future work. One limitation is the demographic information about the participants. Future investigation should include participants who are more thoroughly representative of different age groups and other demographic factors. Another limitation is the limited qualitative data. Future research would benefit from encouraging participants to share their

experience in free text, to allow for cross-reference between quantitative measures and individual perception of wellbeing and emotion.

Acknowledgements

We would like to acknowledge the Confucius Institute at the University of Wales Trinity Saint David, the Jiangxi University of Traditional **Chinese Medicine** (JUTCM) and in particular Krystyna Krajewska, Yanxia Zhao, Yiyang Jiao, Zhangyang Zhao. The TCM Qigong exercise (*Lung Benefiting and Strengthening Qigong Exercise* (*健肺复原导引法*)) was delivered live online by Zhangyang Zhao.

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Appendix A

Wellbeing diary **Welcome**

My diary

Welcome to your wellbeing diary. You can use it to reflect on how you feel and on your strategies for wellbeing. You will then have the option of saving your diary entries so you can access them in future via the 'My diary' link

Data is collected for research. If you would like to take part and use the diary click agree

Agree

unn-izge1.newnumyspace.co.uk/wellbeing/confucius/index.php

Wellbeing diary **Sense of wellbeing post**

Sign up

Please now **again** reflect on, and rate your perception of how you are feeling **in the moment** using all of the sliders below:

To remind you of how you completed the form last time, the sliders has been set to the last position you choose. You can change them

Physical Wellbeing

Poor Excellent (0)

Please describe any comfort / discomfort you are aware of

Sense of meaning
Psychology Mental processes
Subject of processes

unn-izge1.newnumyspace.co.uk/wellbeing/confucius/senseOfWellbeingPostForm.php

The screenshot shows a web browser window with two tabs: 'Wellbeing diary - participan' and 'Confucius Institute welll'. The address bar contains the URL 'unn-izge1.newnumyspace.co.uk/wellbeing/confucius/senseOfWellbeingForm.php'. The main content area is titled 'Emotional Wellbeing' and features a horizontal scale from 'Poor' to 'Excellent'. The scale is marked with 10 segments, with the first 5 segments filled in blue. Below the scale is a text box with the prompt 'Please describe any emotions and thoughts you are aware of'. The browser's taskbar at the bottom shows the search bar with 'Type here to search', several application icons, and the system tray with the time '12:15' and date '29/08/2020'.

The screenshot shows the same web browser window as above, but the main content area is now titled 'Sense of meaning in daily activities'. It features a horizontal scale from 'None' to 'In all daily activities'. The scale is marked with 10 segments, with the first 5 segments filled in blue. Below the scale is a text box with the prompt 'Please leave a comment if you would like to'. The browser's taskbar at the bottom is identical to the previous screenshot, showing the search bar, application icons, and system tray with the time '12:15' and date '29/08/2020'.

Wellbeing diary - participan Confucius Institute welll x + v

unn-izge1.newnumyspace.co.uk/wellbeing/confucius/howFeelingForm.php

Please rate the quality of your experience in this moment using the quadrant below

Alert

Agitated Excited

Negative Positive

Depressed Relaxed

Quiet

Positive/Negative: 0

Type here to search 12:16 29/08/2020 20

Wellbeing diary - participan Confucius Institute welll x + v

unn-izge1.newnumyspace.co.uk/wellbeing/confucius/howFeelingProcess.php

Wellbeing diary

How are you feeling now?

Sign up

You have submitted your pre-wellbeing task diary entry. Please now

1. Enter the name of your wellbeing task
2. Go to and complete your wellbeing task (**open it in a new window if it is web based and leave this window open**)
3. When complete come back to this page and click **next** to complete a post-wellbeing task diary entry.

Type here to search 12:19 29/08/2020 20

Authors Bios



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Lee Walton, is a research assistant at Northumbria University where he is completing his final year in the degree of MComp Computer Science with Web Development. His main areas of work are in server and client-side web technologies.

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