Global coherence, healing meditations using HeartMath applications during COVID-19 lockdown

International lockdown and social distancing as a response to COVID-19 indicate planetary interconnectedness. This South African case study compared global coherence, healing meditations using HeartMath Global Coherence and Inner Balance electronic applications (apps) before and during a 3-week lockdown period. Methodology integrated quantitative and qualitative components. Findings revealed significant meditation coherence and achievement increases and significant correlational cluster patterns between meditation data and global coherence increases, magnetometer readings. Local and global healing phenomena, dynamics, mechanisms and implications are discussed.

Contribution: This article represents research within a paradigm in which the intersection of philosophy, religious studies, social sciences, humanities and natural sciences generate an interdisciplinary, multidisciplinary and transdisciplinary contested discourse.

Keywords: COVID-19; global coherence; healing; HeartMath; meditation; South Africa.

Introduction

On 31 December 2019, Coronavirus Disease 2019 (COVID-19) was declared a pandemic, requiring emergency management (WHO 2020). International lockdown in many countries emphasise global, planetary interconnectedness. Today, this interconnectedness includes many enveloping technological communication systems, for example, the internet, Skype and Global Consciousness Project (GCP). This project consists of a system of about 70 random event generators, placed all over the planet, which provide statistical effects signals in synchrony with significant events such as the death of Nelson Mandela or an intentional peace day, and, most recently, mass emotional responses in relation to COVID-19 (Nelson 2020). Detailed information is available at: http://noosphere.princeton.edu.

The earth’s magnetic field facilitates a global information network, which is measured by six ultrasensitive, magnetic field detectors, strategically installed around the planet by the HeartMath, Global Coherence Initiative (McCraty et al. 2018). This article summarises global coherence, healing meditation practices during the COVID-19 Lockdown, state-regulated, social distancing period in South Africa from 27 March through 17 April, 2020. Global Coherence and Inner Balance electronic applications (apps), served to measure meditation sessions. Although wearable self-health technologies are improving continually, ongoing monitoring of such technology is vital to ensure general ethics and quality of health of the public (Cannard et al. 2020).

The present case study specifically aimed at investigating the relevance of the global coherence initiative to COVID-19, with special reference to meditation, healing practices, dynamics and mechanisms. The research question concerned the influence the lockdown would have on meditation. As healing meditations are regular activities, the null hypothesis applied, that is, no significant change was expected in HeartMath meditation measurements taken before and after lockdown.

Method

As this case study concerned the author’s investigation into healing meditation practices, its integral, empirical and heuristic phenomenological approach viewed consciousness as intentional (Mihalache 2019; Yoshimi 2016); in this case, directed towards global coherence and health promotion. A phenomenological approach required some personal identification statements, and as far as this is possible, ongoing bracketing of assumptions, in order to investigate and report
phenomena as accurately as possible (Kenny 2012). Therefore, it is reported that the author, aged 70, is a research fellow at the University of Zululand with a lifetime experience of academic research, teaching and community service. In addition to deep gratitude for a meaningful and productive career, ultimate gratitude is also expressed for a loving family, great friends, an active lifestyle, a Fitbit excellent cardio fitness rating of over 60 and many years of regular cardiorespiratory-based meditation practice.

Case study
This case study employed a mixed-methods design for recording empirical and experiential data, from individual and collective, objective and subjective, researcher and participant perspectives (Fetters, Curry & Creswell 2013; Lindhard 2019; Wilber 2000). With their measuring, monitoring and biofeedback functions, the HeartMath Global Coherence and Inner Balance instruments facilitated global and personal, objective and subjective, quantitative and qualitative, collective and individual records of meditation sessions. They also provided methodological triangulation and data audit trail for further studies. Although autobiographical writings are inevitably biased by virtue of their personal experiential nature, the HeartMath instruments served to provide some guarantee of validity and reliability of quantitative data. In the case of qualitative data, the instruments also served to provide some assurance of such qualitative research criteria as dependability, credibility, transferability and trustworthiness. In their uniqueness, case study findings are not readily generalisable, but do facilitate depth and detail in the exploration and explication of events and experiences. Moreover, case studies have great value in generating hypothesis for further large-scale studies and general scientific advancement.

Investigation
HeartMath practices since 09 November 2019 were reviewed. This date was chosen as it roughly coincided with the above-mentioned initial reporting of the first known case of COVID 19 (WHO 2020). The South African Lockdown experience was scheduled for 27 March until Friday 17 April. Meditation was in prone, yogic _sukhasana_ position.

Reflecting on the word ‘Lockdown’ reveals its prison connotations, for example of Nelson Mandela’s tiny cell on Robben Island. It is wonderful to relate how this great man transformed humanity as did Buddha, Christ and Mohammed. The author worked at a rural, historically black university for most of his academic life (Edwards 2014). There were numerous incidents of violence and much suffering. In fact, the rallying slogan: ‘an injury to one is an injury to all’ also aptly describes the present, international, health context. In South African Apartheid days, many students self-referred for counselling, expressing the conflict that they were caught between ancestral consciousness and Christianity. The mediation solution was that Jesus is an ancestor – the greatest ancestor from the Christian perspective – along with all the other ancestral saints who continue to heal and guide humanity. Similar inclusive resolutions may be found for whatever conflict, for example, many parasuicide situations, reflecting Moslem and Hindu cultural conflicts. From an integral psychological perspective, considerable theory (Wilber 2000), as well as practical experience, also teaches that solutions to physical, psychological, religious and political conflicts emerge spontaneously, or readily, if people are able and assisted to transcend and include earlier developmental stages, at whatever the level of impasse, intrapersonal, interpersonal, transpersonal and ecological.

It should be mentioned that Africa, south of the Sahara, is predominantly Christian as well as ancestral reverence orientated. It should also be noted that in apartheid days, ‘National Christian Education’ was (mis)used to buttress the pillars of that nefarious system of forced racial oppression. On the other hand, the largest Southern African religious movement, the African Indigenous Churches (AICs), which synthetically practise Christianity, with particular emphasis on ancestral consciousness, were instrumental in preventing violence and civil war, before, during and after apartheid struggles (Edwards 2011). Although formerly retired, the author remains in close electronic contact with doctoral students, local community church and friends. In formal retirement years, he and his wife downsized to a lock-up-and-go apartment, in a block with 21 units, with considerable communal space between apartments. Most of the author’s working life involved research, teaching and health promotion amongst previously disadvantaged communities. The conditions of South African squatter camps, and the potential ease with which COVID-19 could spread, necessitated the extension of the original 3-week lockdown to prevent further local incidence and prevalence of the pandemic.

The global coherence healing meditations were predominantly Prayer of the Heart orientated (Louchakova 2007), including various wisdom traditions, African ancestral consciousness, Christian, Islamic, Hindu, Buddhist and Taoist and typically monitored by HeartMath technology to provide coherence biofeedback. The investigation took part over the Easter period. The author was involved in pastoral counselling for the local Christian church, where he gave a lecture on the ‘Intersection of Science, Philosophy and Religion – The Role of the Heart in Life, Love and Light’. On 14 March, less than 2 weeks before the COVID-19 lockdown.

Instruments
The HeartMath Global Coherence and Inner Balance instruments were used for measurement and monitoring of meditation. The Global Coherence app was used in longer meditation sessions, which focused on radiating global coherence, planetary healing and love. Shorter Inner Balance app meditations were practised after physical exercise. The Global Coherence app records individual,
group and global levels of coherence. Sessional data are continually updated, which implies that mean data are more suitable than achievement data for calculation purposes. On the other hand, inner balance mean and achievement data were readily available per session (Edwards 2019; McCraty et al. 2018).

**Ethical consideration**

Ethical considerations followed the Helsinki Declaration, with institutional approval obtained from the University of Zululand, Research Committee, project number S894/97. The author is a registered psychologist and licensed HeartMath coach and mentor. Although working independently of the HeartMath Institute, through regular communication, he remained fully informed as to HeartMath initiatives to manage the coronavirus through recognition and transmutation of negative emotions and actions, such as fear and over-care, and promotion of renewing and positive emotions, consciousness, spirituality and related health behaviour. As a registered psychologist, he was informed as to psychological knowledge and interventions related to COVID-19. There was no conflict of interest as the study’s aim was to promote health, as well as provide knowledge and instruction in the case of unique experiences related to a unique event, the South African COVID-19 lockdown.

**Results**

Results refer to quantitative and qualitative findings, with their accompanying tables and global coherence meditation sessions, respectively.

**Quantitative findings**

Table 1 refers to baseline and lockdown means for Global Coherence (GC), Inner Balance (IB), Inner Balance Achievement scores per session (ACH).

Table 1 indicates baseline and lockdown means, Mann–Whitney non-parametric comparisons and significance levels. There were highly significant increases in global coherence ($U = 3.20$, $p = 0.001$), Inner Balance ($U = 5.37$, $p = 0.000$) and achievement scores ($U = 2.78$, $p = 0.005$), indicating improved meditation quality and quantity. Qualitative findings provide further depth and detail.

Table 2 refers to Spearman’s correlation coefficients, with 5% and 10% significance levels indicated by single asterisk (*) and double asterisks (**) as per usual statistical convention. Abbreviations used (GC, IB, ACH) are the same as in Table 1. Lock refers to the 3-week COVID-19 lockdown period. GC1, GC2, GC3, GC4, GC5 and GC6 refer to Global Coherence Magnetometer readings from California, Saudi Arabia, Lithuania, Canada, New Zealand and Hluhluwe, respectively. Total magnetometer readings (GC2TOT) refers to total magnetometer readings. All magnetometer readings were taken at noon (12–1 PM) on the same day as the meditation data, respectively.

Table 2 indicates significant correlational cluster patterns between the meditation data on the one hand and the global coherence magnetometer readings on the other hand. The significantly correlated global coherence data provide evidence for planetary interconnectedness as researched in many HeartMath studies (McCraty et al. 2018). Endorsing the significance patterns observed in Table 1, Lockdown (Lock) appears significantly correlated with Global Coherence ($GC = 0.27$), Inner Balance ($IB = 0.44$) and Achievement ($ACH = 0.23$). It is significantly positively correlated with Lithuania and Canada magnetometer data and significantly negatively correlated with Hluhluwe data. Similar correlational patterns were observed in an earlier study (Edwards 2019). Beyond the malfunction of the Hluhluwe magnetometer for the last week of Lockdown, as from 11 April, no firm hypotheses have yet emerged for this one relatively anomalous finding. Further randomised controlled studies with larger samples are needed to investigate such a finding and advance reasonable hypotheses.

**Qualitative findings**

Some social and contextual observations seem necessary. Although no exact records exist, most members of the apartment block seemed to strictly observe the lock-in. Although social distancing was certainly operating in the local community, social relationships continued, for example, to raise funds for suffering persons through the Bambalela Marathon Challenge. Electronic communication increased, particularly with family and friends. There was increased local communication and closer relationships amongst members in the apartment block.

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**Table 1:** Baseline and lockdown mean scores for global coherence (GC), inner balance (IB) and inner balance achievement data.

<table>
<thead>
<tr>
<th>Variable</th>
<th>GC ($U$)</th>
<th>IB ($U$)</th>
<th>ACH ($U$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>4.6</td>
<td>5.5</td>
<td>444.9</td>
</tr>
<tr>
<td>Lockdown</td>
<td>5.2</td>
<td>6.8</td>
<td>456.7</td>
</tr>
<tr>
<td>Mann–Whitney U</td>
<td>3.20</td>
<td>5.37</td>
<td>2.78</td>
</tr>
<tr>
<td>Significance</td>
<td>0.001</td>
<td>0.000</td>
<td>0.005</td>
</tr>
</tbody>
</table>

ACH, achievement; IB, inner balance; GC, global coherence.

**Table 2:** Spearman’s correlation coefficients.

<table>
<thead>
<tr>
<th>Variable</th>
<th>GC</th>
<th>IB</th>
<th>ACH</th>
<th>LOCK</th>
<th>GC1</th>
<th>GC2</th>
<th>GC3</th>
<th>GC4</th>
<th>GC5</th>
<th>GC6</th>
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<tbody>
<tr>
<td>GC</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>IB</td>
<td>0.45**</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>ACH</td>
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<tr>
<td>LOCK</td>
<td>0.27**</td>
<td>0.44**</td>
<td>0.23**</td>
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<tr>
<td>GC1</td>
<td>0.03</td>
<td>-0.01</td>
<td>-0.13</td>
<td>0.20</td>
<td></td>
<td></td>
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<tr>
<td>GC2</td>
<td>0.05</td>
<td>0.16</td>
<td>0.04</td>
<td>0.10</td>
<td>-0.21**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GC3</td>
<td>0.20*</td>
<td>0.26**</td>
<td>0.05</td>
<td>0.32**</td>
<td>0.52**</td>
<td>-0.05</td>
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<tr>
<td>GC4</td>
<td>0.08</td>
<td>-0.14</td>
<td>-0.04</td>
<td>0.34**</td>
<td>0.67**</td>
<td>0.03</td>
<td>0.49**</td>
<td></td>
<td></td>
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<tr>
<td>GC5</td>
<td>0.12</td>
<td>-0.07</td>
<td>-0.04</td>
<td>-0.06</td>
<td>0.29**</td>
<td>-0.12</td>
<td>0.41**</td>
<td>0.16*</td>
<td></td>
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<tr>
<td>GC6</td>
<td>-0.02</td>
<td>-0.17*</td>
<td>-0.05</td>
<td>0.24**</td>
<td>0.03**</td>
<td>0.24**</td>
<td>0.24**</td>
<td>0.35**</td>
<td>0.05</td>
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<td>GC2TOT</td>
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<td>-0.10</td>
<td>-0.06</td>
<td>-0.04</td>
<td>0.50**</td>
<td>-0.05</td>
<td>0.56**</td>
<td>0.35**</td>
<td>0.36**</td>
<td>0.86**</td>
</tr>
</tbody>
</table>

ACH, achievement; IB, inner balance; GC, global coherence; LOCK, lockdown.
Global coherence healing meditations

Qualitative experiential data that arose from sequential global coherence (GC) meditations follow, each with their identifying date. The meditations diary typically has no experiential descriptions and some a very few words. The following healing meditations were most relevant from the global coherence perspective.

GC: 1-4-2020
This meditation focussed on cultivating and radiating integral, spiritual heart love. It began with regular, relaxed heart-breath synchronised rhythm, which facilitates renewal, builds resilience and promotes healing.

GC: 10-4-2020
Easter ‘Good Friday’. Lengthening the heart coherence rhythm up to 10 s or more per in breath and outbreath, so as to experience a heart-beat based, respiration pattern of three or four cycles per minute. This global healing meditation pattern, which developed at the same time as hearing of COVID-19, became particularly meaningful on this sacred day.

GC: 11-4-2020
Holy Saturday, where tradition has it that Jesus healed all in the underworld. Meditation was experienced as ‘Centred in God in heart rhythm’. This structured HeartMath session, especially focussed on Jesus in terms of Easter process of resurrection, being cared for by Mary Magdalene in consciousness as interpreted by Borg (2011), Bourgeault (2016) and De Chardin (1959). Locally, consciousness was with the Zionist group, the largest religious group in South Africa with over 2 million members, who traditionally would have met in mass at Moria over the Easter weekend. Others would also have gathered in worship at the sea, on mountains and traditional places. There would be mass grieving, both for ancestors, the deceased and the fact that they had not been able to congregate owing to the lockdown. They also thought of our local people in Ndwedwe who had to return home because of lockdown. The church is trying to provide extra support for suffering poverty-stricken families, many of whom are unemployed, have lost relatives from HIV. One TV programme was on a poverty stricken, Zulu grandmother, tragically mixing sand with maize to make food last longer for her grandchildren.

GC: 12-4-2020
Easter day. Prayer of the Heart, kenotic release and alignment with the All, perfection, Omega point, love, Risen Christ, Sacred Heart, radiating love and healing vibrational consciousness to all. Considerable focus was on doctoral students, especially one who needed support and encouragement to keep following her integrity of intuition. Special love was felt for Siphiwe Ngcobo, National Psychology Society Chairperson, who was tragically murdered. How vulnerable, yet how directed, humanity can be in consciousness, life, love, light! The language of the heart requires one to mention its social aspects as so clearly expressed in the Zulu idiom: ‘umuntu umuntu ngabantu’ [I am because we are] with its additional emphasis on the individual as a community of persons, especially those with whom life-long relationships have been shared. The reality that we are this, seems so much more potent in the context of lockdown, where consciousness includes Jesus Christ, Nelson Mandela, Giordano Bruno and so many others over the years.

GC: 13-4-2020
Sublime sensations of singing silence, surging sea, soft rain, moist soil, still succulents and wet tarmac smell. We will rest till rain stops and play with onomatopoeic poetry to tell story of lock-in. Meditative poetry emerges from the harmonic bliss of heart-beat coherence. Meditation deepens, psychophysiological resonance increases, and when orchestra and singers reach perfect pitch, electromagnetic radiations beam out from the heart in global healing.

GC: 16-4-2020
The focus of this session was on freedom, especially in relation to the soul, as psyche, longing for freedom. Shakespearian passages came to mind: ‘There’s a divinity that shapes our ends, roughew them as we may’ and ‘This above all, to thine own self be true’ Thoughts also arose of Viktor Frankl’s writings, which have provided a great resource for persons in oppressive situations.

GC: 17-4-2020
At one and the same time, God is closer to one than one is to oneself. Also always out there in intention to heal. At the next moment, this perfection is always beyond one’s reach. Such a distinction typically occurs as the certainty in the knowing moment gets dissipated in attempts to express this ultimately ineffable apprehension in words. Various authors interpret this awareness in different ways (Assagioli 1985; Bourgeault 2016; Lindhard 2019; Louchakova 2007; McCraty et al. 2018; Rohr 2015; Wilber 2000, 2016). Wilber (2016) used different developmental level terms such as growing up, waking up and showing up. Assagioli (1985) speaks of the yogic ideal of yoking. From HeartMath perspective, the following are especially important – sustained intentions, relaxation, concentration, emotional awareness, insight and action. Each healer also makes a unique contribution.

Discussion
Findings indicating meditation improvements, implied rejection of the null hypothesis and support for an alternative, research hypothesis of global healing. Lockdown correlated significantly with meditation data from HeartMath applications. Future randomised controlled experimental studies should fully investigate such findings. Considerations as to validity and reliability of the electronic measurements are relevant considerations. Although meditation phenomena
are intrinsically experiential, objective measurement is helpful in data evaluation.

Concerning healing instructions on essential phenomena, dynamics and mechanisms involved in global coherence meditations, the following emerged. Firstly, healing consciousness is holistic. Phenomenological essences cannot be reified into dominant characteristics without diluting the effect. The higher mean of 6.8 observed in IB meditations, as compared with the GC app mean of 5.2, is similar to what Stanley (2009) observed when comparing contemplative and intercessory prayer. For example, contemplative prayer immediately involves total connection with greater Being/Consciousness, whereas intercessory prayer involves additional, energetic channelling of consciousness. Also, GC meditations were typically longer than IB meditations, allowing greater possibility for dispersion of healing consciousness. Secondly, healing is intentional, as Zulu divine healers demonstrated when significantly altering patterns on a random event generator (REG), through beaming healing energy into this device (Edwards 2011). Other healing mechanisms include beneficial human relationships, coherent communication, various heart-breath techniques, for example mantras, precipitating factors, healing contexts and catalysts such as COVID-19. These variables should all be further investigated.

As explicated in the global coherence meditations of 11 and 17 April, the findings resonate with the work of Assagioli 1985; Aurobindo 2011; Bourgeault 2016; Brown and Gerbarg 2009; Lindhard 2019; Louchakova 2007; McCraty et al. 2018; Rohr 2015; Wilber 2000, 2016; Wilber et al. 2008. A curmudgeon article reports on other related findings of this study (Edwards 2020). Ongoing personal and global research continues to provide considerable further support for the research hypothesis of global healing consciousness.

**Conclusion**

Integral findings emphasise the need for further large-scale randomised controlled studies to investigate relationships between GCI magnetometers, pandemics such as COVID-19, and global healing meditation initiatives. For thousands of years, meditation, prayer and contemplation have provided integral heart wisdom with valuable community cascade through teaching and healing. Healers dialogue students to listen carefully to their patients’ narratives, for aetiology, prognosis and healing trajectory. In traumatic times, such as COVID 19, HeartMath praxis and related research involving the Global Coherence Initiative and Global Consciousness Project provide valuable global healing resources.

It needs to mention that this study may inevitably appear biased in terms of Christianity, reflecting both the particular personal, South African bias, as well as the fact that it took place over the Easter season. Atheistic inclined persons, those of other religious, cultural, scientific and wisdom orientations, should either take this into account or, if preferred, discount it, and use other methods and practices. The intention is global coherence, health promotion and planetary healing for all. Wisdom traditions, integral life practices and the collaboration with international organisations have a great potential for global healing if intrinsic planetary interconnectedness becomes more fully recognised. Coronavirus Disease 2019 may well continue to be a required catalyst in interconnected planetary collaboration for health promotion and sustainable ecology.

This study used HeartMath electronic devices for measurement and monitoring purposes. These are not essential. Various forms of healing meditation are readily available to all. Many already practice heart conscious intentionality in seeking greater Being, healing and returning a polluted planet to a sacred state. Coronavirus Disease 2019 is a timely reminder of the value of cardio-respiratory based meditation and heart-felt feelings such as peacefulness, care and love.

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**Competing interests**

The author has declared that no competing interest exist.

**Author’s contributions**

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**Data availability statement**

Data sharing is not applicable to this article as no new data were created or analysed in this study.

**Disclaimer**

The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of the affiliated agency.

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