



Strategic Application of Sustainable Development Goals SDG#3 Wellness and #9 Innovations for Chair Yoga Services for Silver Economy

Shirley Mo Ching Yeung

Gratia Christian College, Hong Kong.
Email: shirleymc@gmail.com

Abstract

The purpose of this paper is to explore the steps of applying Chair Yoga Poses and Technology to help elderly community to rebuild socialization bonding with functional fitness. This paper is to explore the steps of applying 5 steps of design thinking for chair yoga wellness business model for sustainable development. Based on selected literature selected in the past 5 years on chair yoga and yoga intervention with technology, it is found that the key factors identified via Nvivo analysis related to Chair Yoga Sustainable Wellness Business are: Yoga Technology for Socialization via Chair Poses, Multimodibity Care, Mental Focus for Dementia and Yoga Lifestyle for Functional Fitness. And, chair yoga related projects have been initiated by AYC for seniors since 2017 with positive benefits mentioned. It is time to explore the kinds of technology (lighting and online CY training) to be applicable to chair yoga in an innovative sustainable chair yoga business model for the silver economy.

Keywords: Chair Yoga Poses, Design Thinking, Functional Fitness Sustainable Development Goals (SDGs), Yoga Lifestyle, Yoga Technology.

1. Introduction

1.1 Yoga and SDG#3 Wellness

One of the modern lineages of Yoga is yoga therapy. Patanjali says stiram sukam asanam. It has been mentioned that our minds, our muscles, our stretching and breathing are all related to making our health better.

According to the Guruji, Dr. Andiappan, lots of articles and research have been published and accepted that e disease or conditions can be treated by Yoga Therapy, component of Yoga or Yogic life-style as listed below:

- High blood pressure
- Angina
- Myocardial infarction
- Diabetes mellitus
- Obesity
- Headache, Migraine
- Anxiety neurosis
- Drug addiction
- Bronchial asthma
- Premenstrual syndrome
- High serum cholestrol
- Pregnancy
- Acute stress
- Arthritis
- Epilepsy

The philosophy of Andiappan Yoga is that Andiappan yoga is based on Thirumoolar’s Ashtanga Yoga of which Thirumoolar was the father of therapeutic yoga with powers of curative powers of yogic discipline. His message is that all of us belong to the same family of God with one Ultimately Reality. Through developing the sequences of curative asanas, therapeutic benefits and benefits to yoga practitioners themselves can be generated. Andiappan can bring overall improvement of quality of life, physical fitness, work output, memory performances concentration are extra bonus of Yogic lifestyle.

Based on a recent article of Andiappan (2017), “mental and physical fatigue can be lessened by asana practice, which rests the brain and rejuvenates the body and the mind. The practice includes inverted postures like Sirsasana, Viparata Karani and Sarvangasana; forward bening posture such as Padahasthasana, Paschimottanasana, Janu Sisasana and Adho Mukha Svanasana. Backward bending postures like Ustrasana, Chakrasana and Bhujangasana are helpful in relieving mental fatigue, which is the casue of physical dullness and laziness. In addition, twisting posture keeps the spine supple. Pranayama opens the chest and lungs and bring freedom in the diaphragm.” (p. 22)

Emergence of business usually goes along with demographics change of a country and new demands of customers. Demand chain and supply chain management of product/ service are unique for different newly emerged industries under globalization and technological advancement in a society. Educators and industry practitioners need to be aware of these changes to catch up with new skills development and new job creation for sustainable development. In order to understand the benefits of yoga with new skills development and new job creation, Yeung (2017) explored the key elements of yoga business in the past 18 years through literature search. 17 relevant journal papers related to yoga business (1998-2016) have been selected and analyzed with N'vivo software. Based on qualitative and quantitative analysis of these selected literature, three major constructs are found – Inputs of moral development (385 references), quality of education (191 references), commitment (94 references), innovations (85 references), process of services (48 references), and outputs of sustainable development (338 references), decent job creation (312 references), peace of mind (85 references) and social impacts (57 references).

From the perspective of United Nations Sustainable Development Goals (UNSDGs), the results align with the goal#4 – quality of education with transferable skills, goal # 3 well being for quality of life, goal# 8 economic growth with decent job creation and goal #9 innovations for sustainable business. These findings are of practical value in terms of understanding the key elements for sustainable yoga business through re-visiting the ways of educating employees, ways of creating or making use of innovations and ways of measuring improvement in health conditions. This brings insights to industry practitioners, investors, educators and policy makers on the importance of tracing the trend of emerging industry for sustainable development. And, the findings are well aligned with the philosophy of Andiappan's therapeutic yoga.

2. Yoga Training and Quality Service

Embedding Quality, Process Management, ISO 10015 into UNSDGs with the key concepts of “Quality” – meeting or exceeding customers’ requirements and “Continual improvement” – Plan, Do, Check and Act for making continual improvements in manpower, machinery, methods and materials of total quality management (TQM) philosophy have been discussed in different kinds of industries, especially for value-added industries as supply chain management (SCM). Among the four main functions of management – planning, organising, motivating and controlling, each process of management is supposed to add value in the supply chain to fulfil and excel customer needs. Lo et al. (2005) brought forward the concept of customer-perceived values that integrates customer expectations into the designing of supply chain strategies. They mentioned that value of customer perceptions has to be considered carefully during the development stage of supply chain strategies. The insightful contributions of them are to simplify the complex internal operations system into seven categories. They are: strategic planning process (often referred to as the plan supply chain), three operational planning processes (also often referred to as plan source, plan make, and plan deliver) and three operational processes of source, make and deliver. The importance of perceived customer values is clearly demonstrated in the management strategic process; and embedded into operational performance. The systematic concept of “Plan, Do, Check, Act” of ISO 9000 standards can help organizations to make improvement. ISO standards are stepping stone for reaching the ultimate aim of UNSDG 4 quality of education in skill development with knowledge, attitude and values. When applying the concepts of ISO in training design, vision, mission and strategic goals of an organization are very important for delivering quality training services and improving skill development of staff members. ISO 10015:1999 training guidelines can be considered as a holistic framework to cover all the core activities – availability of training materials, training aid and equipment, knowledgeable and accountable trainers, innovative training strategy and a user-friendly and caring training environment for students. As the quality management training guidelines ISO 10015 was born in 1999, the DLDDC (Yeung, 2014) was used to provide a new perspective to ensure training relevancy to achieve UNSDG4.4 with the consideration of the context of chair yoga in this paper.

2.1. Chair Yoga and Functional Benefits

After COVID-19, emotion stability and social relationship have been a concern not only appear in young generation, but also among older adults, especially those managing multiple chronic conditions (multimorbidity) that their social lives may be affected. UNSDG#3 quality of life with wellness with innovative interventions is a burning issue that is prompting a growing interest in non-pharmacological approaches, such as yoga. chair yoga (CY), a modified form of yoga performed while seated or with support, offers a feasible and accessible modality for older adults with physical limitations and multimorbidity (Yen et al., 2021).

Recent studies underscore the effectiveness of chair yoga in enhancing wellness, happiness and reducing anxiety for older populations (Liu et al., 2023). Additionally, applying the 5 steps of design thinking—emphasizing users’ needs from an empathetic approach is the first step, for example, the design of chair yoga sequences to meet the specific needs of individuals is a user-centric process. This paper proposes thoughtfully sequenced chair yoga routines aimed at releasing enhancing wellness, happiness, reducing anxiety and multibiodiversity (a term encompassing multisystem health), and improving functional fitness, grounded in recent empirical evidence and innovative design methodologies.

3. Understanding the Context: Multimorbidity and Anxiety in Older Adults

Multimorbidity—the coexistence of two or more chronic conditions—is increasingly prevalent among aging populations (Vetrano et al., 2020). It complicates management and often leads to increased psychological distress, including anxiety (Huang et al., 2022). Very often, anxiety comes with physical symptoms, impaired mobility, and the overall well-being will be deteriorated. Therefore, interventions that target both psychological wellness and physical healthiness are essential.

Juyoung et al. (2022) mentioned that social isolation and caregiver burden have underlined the need for an innovative way to deliver the chair yoga (CY) intervention to older adults with dementia and their caregivers. Online intervention could eliminate the fear of being infected and the need to travel to an exercise place. Technological interventions for assisting older adults with dementia (e.g. application development, use of robotics,

sensors, locator devices, reminders, virtual realted technology) have created the potential for home-based CY interventions with real –time monitoring through a secure videoconferencing platofrm. (p. 3)

4. Design Thinking in Developing Chair Yoga Sequences

Design thinking emphasizes 1) empathy, 2) define, 3) ideation, 4) prototyping, and 5) testing—approaches that can be applied to develop user-centered chair yoga sequences tailored for older generation to enhance wellness with multimorbidity and reduce anxiety (Brown, 2022). Engaging stakeholders to understand the needs of CY users and the concerns of carers in the CY sequence design process is important so as to bring enjoyable and effective intervention.

The key principles include:

- Empathy: Understanding the needs of service users and physical limitations, preferences, and emotional states of CY service users and carers.
- Ideation: Brainstorming with CY practitioners for a design plan of diverse movement sequences for wellness, relaxation, mobility, and mindfulness.
- Prototyping: Developing steps with replicated procedures with feedback for improving the implementation of CY sequences.
- Testing and Iteration: Refining sequences based on CY users and carers' feedback to meet expected outcomes.

It is suggested to apply these principles results in a personalized CY sequences to foster engagement, reduce anxiety, and promote physical resilience.

4.1. Strategies for Chair Yoga Sequences

1. Time Allocation and Lesson Plan

Warm-Up and Grounding (5-7 minutes)

Objective: Prepare the body and mind, promote grounding, and set an intention for relaxation.

For example:

- Seated Breath Awareness: Sit upright with feet flat, hands resting on thighs. Inhale slowly through the nose and exhale through the mouth
- Neck Rolls: Gently roll head clockwise and counterclockwise to release tension.
- Shoulder Rolls: Lift shoulders towards ears on inhale, roll back and down on exhale. Repeat 5 times.

2. Present, Practice and Play (3Ps)

Gentle Mobilization and Stretching

(10-15 minutes)

Objective: Increase circulation, reduce muscular tension, and foster bodily awareness.

For example:

- Arm Cross Stretch: Bring right arm across chest, use left hand to gently press, hold for 3 breaths; repeat on the other side.

3. Rubrics for Measuring and Achieving above item 1) and 2)

From warm-up, 3Ps to Breathing and Mindfulness Practice (10 minutes)

Objective: Activate relaxation response and reduce anxiety.

For example:

- Loving-kindness Meditation: Focus on sending goodwill and compassion to oneself and others, fostering positive emotional states.

4. Relationship Building with Trust of CY Service Providers and Carers

Gentle Dynamic Movements (10 minutes)

Objective: Improve joint mobility and promote positive mood through movement.

For example:

- Arm Circles: Small arm circles forward and backward for 30 seconds each.
- Cool-Down and Relaxation (5-7 minutes) with colorful diagrams for a peaceful place for CY to engaging all senses for 3-5 minutes.

4.2. Design Thinking and Benefits of Chair Yoga Sequences

To effectively implement these sequences, a user-centered approach is essential. Involving older adults in co-creating routines ensures relevance and adherence. For example, initial focus groups can gather preferences, physical limitations, and cultural considerations. Iterative testing allows practitioners to refine sequences, ensuring they are safe, engaging, and effective.

Intervention strategy with modifications—for instance, using resistance bands or cushions—can personalize the experience. Incorporating feedback on perceived difficulty, enjoyment, and psychological effects guides ongoing improvements. Digital platforms with visual cues and instructions can enhance accessibility, especially during remote interventions.

Benefits of the Proposed Chair Yoga Sequences

Empirical evidence supports the multifaceted benefits of such sequences:

- Anxiety Reduction: Breathing exercises and mindfulness within chair yoga have been shown to decrease perceived stress and anxiety (Liu et al., 2023; Huang et al., 2022).
- Multibiodiversity Enhancement: Gentle movements support multisystem health, including cardiovascular, musculoskeletal, and nervous systems (Vetrano et al., 2020).
- Functional Fitness: Improved joint mobility, muscle strength, and balance contribute to independence and

safety (Yen et al., 2021).

By integrating these sequences into regular routines, older adults managing multimorbidity can experience improved mental health, physical resilience, and overall quality of life.

5. Methodology and Key Findings

5.1. Research Objectives (ROs):

Previous research has found that UNSDG#4 quality of education in sustainable development has not been comprehensively explored in yoga business. This research explores further on the key elements for building an intangible culutral heritage yoga practice model for sustainable development.

Two Research Objectives (RQs):

- 1) What are the key elements for Chair Yoga Wellness Business Model?
- 2) What are the recommendations for technology applied in chair yoga related services for social impacts in yoga business?

Part 1 – Qualitative Analysis

A research was performed to analyze factors possibly related to chair yoga wellness model (2942 references). 12 articles published from 2022 to 2025 were discovered. By thoroughly delving into the articles, various relatable factors are identified to the topic. To further determine their relationship to the topic, by using Nvivo, a text search was performed for the mentioned keywords. The search result showed that a few of the factors such as 1) Yoga Technology for Socializtion via Chair Poses (3206 references), 2) Multimorbidity Care (612 references), 3) Mental Focus for Dementia (442 references) and 4)Yoga Lifestyle for Functional Fitness (2624 references) were cited relatively more frequently correspondingly. (Table 1). This is managerial relevant to chair yoga wellness services planning and curriculum planning. However, quantitative and qualitative research for chair yoga wellness business framework on Qualifcation Framework (QF) is needed for competency building of chair yoga service trainers and service providers.

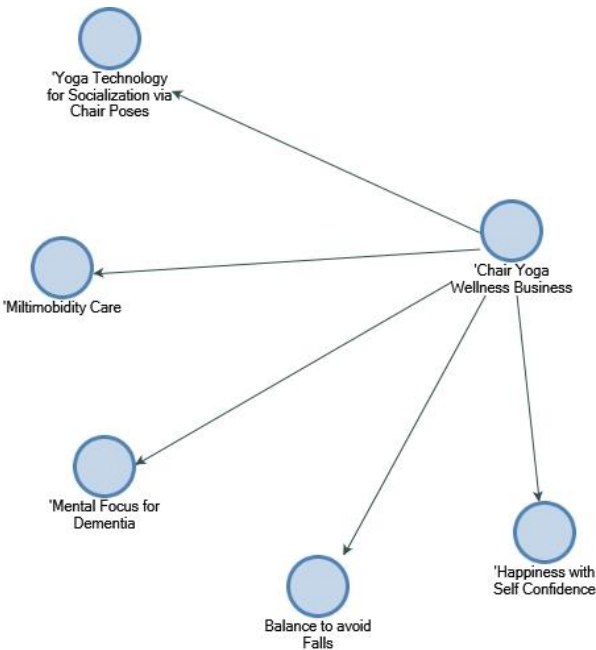


Figure 1. Chair Yoga Wellness Business Model

Table 1. Text Search on Chair Yoga Wellness Business.

Name	Sources	References
'Chair Yoga Wellness Business	12	2942
'Yoga Technology for Socialization via Chair Poses	12	3206
'Miltimorbidity Care	11	612
'Mental Focus for Dementia	12	442
'Yoga lifestyle for Functional Fitness	12	2636
Balance to avoid Falls	12	269
'Happiness with Self Confidence	12	173
'Emotional Lonliness Reduction	11	73

Table 2. Text Search – Chair Yoga Sustainable Wellness Business.

Name	References	Coverage
Association_between_yoga_and_multimorbidity_a_nati	102	0.48%
Chair Yoga 2023 MDPI healthcare-11-01024	154	0.81%
Chair Yoga 2025 s12877-025-05782-3	201	0.68%
claritylitrevi Chair Yoga 2023	164	1.70%
Home Based Chair Yoga nihms-1835405	45	0.14%
U of York Yoga GYY summary briefing v11Oct23	30	0.74%
Yoga and Anxiety 2024-reduced-anxiety-and-depression-and-improved-mood-in-older-adults-living-in-care-homes-after	264	1.27%
Yoga and Eldery obm.geriatr.2202197	446	0.72%
Yoga and General Sickness 2025 s12877-025-05782-3 (2)	201	0.68%
Yoga and Multimorbidity 3046211	685	0.27%
Yoga Northumbria s12877-025-05782-3 (4)	201	0.68%
Yoga Strategies 2023 978-3-030-91262-8_21-1 (1)	449	0.83%

Table 3. Text Search on Yoga Technology for Socialization.

Name	References	Coverage
Association_between_yoga_and_multimorbidity_a_nati	102	0.48%
Chair Yoga 2023 MDPI healthcare-11-01024	159	0.83%
Chair Yoga 2025 s12877-025-05782-3	208	0.73%
claritylitrevi Chair Yoga 2023	165	1.73%
Home Based Chair Yoga nihms-1835405	116	0.47%
U of York Yoga GYY summary briefing v11Oct23	31	0.84%
Yoga and Anxiety 2024-reduced-anxiety-and-depression-and-improved-mood-in-older-adults-living-in-care-homes-after	272	1.32%
Yoga and Eldery obm.geriatr.2202197	452	0.74%
Yoga and General Sickness 2025 s12877-025-05782-3 (2)	208	0.73%
Yoga and Multimorbidity 3046211	927	0.46%
Yoga Northumbria s12877-025-05782-3 (4)	208	0.73%
Yoga Strategies 2023 978-3-030-91262-8_21-1 (1)	358	0.69%

Table 4. Text Search on Multimorbidity with Care.

Name	References	Coverage
Chair Yoga 2023 MDPI healthcare-11-01024	6	0.03%
Chair Yoga 2025 s12877-025-05782-3	16	0.05%
claritylitrevi Chair Yoga 2023	3	0.03%
Home Based Chair Yoga nihms-1835405	4	0.01%
U of York Yoga GYY summary briefing v11Oct23	7	0.16%
Yoga and Anxiety 2024-reduced-anxiety-and-depression-and-improved-mood-in-older-adults-living-in-care-homes-after	74	0.32%
Yoga and Eldery obm.geriatr.2202197	28	0.04%
Yoga and General Sickness 2025 s12877-025-05782-3 (2)	16	0.05%
Yoga and Multimorbidity 3046211	435	0.17%
Yoga Northumbria s12877-025-05782-3 (4)	16	0.05%
Yoga Strategies 2023 978-3-030-91262-8_21-1 (1)	7	0.01%

Table 5. Text Search - Mental Focus for Dementia

Name	References	Coverage
Association_between_yoga_and_multimorbidity_a_nati	6	0.04%
Chair Yoga 2023 MDPI healthcare-11-01024	5	0.04%
Chair Yoga 2025 s12877-025-05782-3	22	0.11%
claritylitrevi Chair Yoga 2023	5	0.09%
Home Based Chair Yoga nihms-1835405	71	0.41%
U of York Yoga GYY summary briefing v11Oct23	8	0.30%
Yoga and Anxiety 2024-reduced-anxiety-and-depression-and-improved-mood-in-older-adults-living-in-care-homes-after	61	0.47%
Yoga and Eldery obm.geriatr.2202197	34	0.09%
Yoga and General Sickness 2025 s12877-025-05782-3 (2)	22	0.11%
Yoga and Multimorbidity 3046211	109	0.07%
Yoga Northumbria s12877-025-05782-3 (4)	22	0.11%
Yoga Strategies 2023 978-3-030-91262-8_21-1 (1)	77	0.22%

Table 6. Text Search – Balance to Avoid Falls.

Name	References	Coverage
Association_between_yoga_and_multimorbidity_a_nati	1	0.01%
Chair Yoga 2023 MDPI healthcare-11-01024	28	0.21%
Chair Yoga 2025 s12877-025-05782-3	4	0.02%
claritylitrevi Chair Yoga 2023	11	0.13%
Home Based Chair Yoga nihms-1835405	16	0.07%
U of York Yoga GYY summary briefing v11Oct23	4	0.13%
Yoga and Anxiety 2024-reduced-anxiety-and-depression-and-improved-mood-in-older-adults-living-in-care-homes-after	24	0.16%
Yoga and Eldery obm.geriatr.2202197	97	0.23%
Yoga and General Sickness 2025 s12877-025-05782-3 (2)	4	0.02%
Yoga and Multimorbidity 3046211	67	0.04%
Yoga Northumbria s12877-025-05782-3 (4)	4	0.02%
Yoga Strategies 2023 978-3-030-91262-8_21-1 (1)	9	0.03%

Table 7. Text Search on Happiness with Self Confidence.

Name	References	Coverage
Association_between_yoga_and_multimorbidity_a_nati	4	0.05%
Chair Yoga 2023 MDPI healthcare-11-01024	2	0.01%
Chair Yoga 2025 s12877-025-05782-3	10	0.04%
claritylitrevi Chair Yoga 2023	2	0.02%
Home Based Chair Yoga nihms-1835405	3	0.01%
U of York Yoga GYY summary briefing v11Oct23	2	0.08%
Yoga and Anxiety 2024-reduced-anxiety-and-depression-and-improved-mood-in-older-adults-living-in-care-homes-after	1	0.01%
Yoga and Eldery obm.geriatr.2202197	21	0.03%
Yoga and General Sickness 2025 s12877-025-05782-3 (2)	10	0.04%
Yoga and Multimorbidity 3046211	84	0.04%
Yoga Northumbria s12877-025-05782-3 (4)	10	0.04%
Yoga Strategies 2023 978-3-030-91262-8_21-1 (1)	24	0.07%

Table 8. Text Search on Emotional Lonliness Reduction (Least Importance).

Name	References	Coverage
Chair Yoga 2023 MDPI healthcare-11-01024	2	0.02%
Chair Yoga 2025 s12877-025-05782-3	2	0.01%
claritylitrevi Chair Yoga 2023	2	0.04%
Home Based Chair Yoga nihms-1835405	8	0.05%
U of York Yoga GYY summary briefing v11Oct23	1	0.05%
Yoga and Anxiety 2024-reduced-anxiety-and-depression-and-improved-mood-in-older-adults-living-in-care-homes-after	1	0.01%
Yoga and Eldery obm.geriatr.2202197	18	0.06%
Yoga and General Sickness 2025 s12877-025-05782-3 (2)	2	0.01%
Yoga and Multimorbidity 3046211	17	0.02%
Yoga Northumbria s12877-025-05782-3 (4)	2	0.01%
Yoga Strategies 2023 978-3-030-91262-8_21-1 (1)	18	0.07%

5.2. What are the Recommendations for Technology Applied in Chair Yoga Related Services for Social Impacts in Yoga Business?

Technology in chair yoga related services primarily involves using virtual platforms like Zoom for remote service delivery, and interacting with trainers and participants for improving the wellbeing of older adults who may be socially isolated individuals.

Juyoung Park et al. (2022) mentioned that “it is feasibile to conduct a home-based remotely supervised online Chair Yoga (CY) intervention with older adults with dementia.” (p. 11) They highlighted that it is possible to have a remotely supervised online CY intervention targeted at older adults with dementia and measuring outcomes virtually under the remote guidance.

“The results indicated that this remotely supervised online CY intervention was feasible for this population. Telehealth-based CY intervention was found t be convenient to both participants and their caregivers because it was accessible from home and did not equire transportation or getting dressed, which reduced caregiver burden and stress.” (Juyoung, 2022, p. 11/12)

Moreover, Yeung & Lee (2025) mentioned that the feasible actionable steps aligned with the SDGs, particularly SDG3 (Wellness), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 8 (Decent Work and Economic Growth), SDG 9 Innovations, and SDG 17 (Partnerships for the Goals). It is suggested to implement ISO 14068-2023 Climate Change Management System for Transition to Net Zero in design of lighting in hotels to reinforce responsible management in the hotel common areas and hotel rooms with wellness. (Yeung & Lee, p.1388).

“ISO 14068 provides a framework for impact governance, emphasizing transparency, stakeholder engagement, and lifecycle assessment in environmental management (ISO, 2020). For hotel lighting, ISO 14068 encourages companies to evaluate the entire lifecycle—from sourcing lighting components to disposal—ensuring eco-friendly practices. Recent publications highlight the integration of ISO 14068 standards into hotel sustainability strategies, focusing on energy-efficient lighting systems that minimize environmental impacts (Yeung & Sachs, 2022). This involves selecting low-impact materials, utilizing renewable energy sources, and designing for recyclability.” (Yeung & Lee, 2025, p.1390)

Moreover, City University, London has published a paper on “Lighting Well-being and Performance at Work”, mentioning that “Studies have also found that the colour of lighting can have an effect on a persons’ mood and work performance (Kuller, 2006). One experimental study of the effects of lighting, age and gender on mood and cognitive performance, found a gender difference in that younger females experienced positive and negative mood for longer than the males. Older adults showed a negative mood in cool bluish lighting, whilst younger adults showed a more negative mood in warm, reddish light (Knez & Kers, 2000).” (p.11)

Moreover, it put forward that “globalisation, international working, and increasing workplace diversity, together with the rise in knowledge intensive work, all bring significant challenges for companies.” There are five areas of lighting related to the design of the workplace: 1. Service work 2. Knowledge work 3. Virtual working 4. Working across space and time zones 5. Changing demographics. For chair yoga service providers, lighting should be considered to the CY service work delivery, including virtual CY space and the lighting applied in the physical space for better CY participants’ engagement and performance. For example, the lighting may be softer and warmer for restorative or meditative sessions to create a tranquil atmosphere while cooler, energizing lights are suitable for dynamic chair yoga for younger silver aged participants. Overall, warmer, dimmer lighting is generally more appropriate, especially for evening or relaxation-focused CY classes for older silver aged participants. Here are the key strategies for applying appropriate lighting in Chair Yoga Services:

- 1) Visibility - Ensure there is sufficient lighting so all participants can clearly see the instructor(s) and the chairs in front of them, especially in the limited virtual space.
- 2) Use of Warmer Color Lighting Tones for Relaxation:
Soft, warm lighting (2700K-3000K) may create a calm and peaceful environment for trying some basic CY poses for elderly.
- 3) Cooler Color Lighting Tones for Energy:
For dynamic or morning chair yoga sessions, a brighter, cooler light (4000K-5000K) can help elderly to have better energy to try some challenging poses.
- 4) Flexibility in the Control of Lighting:
Having user-friendly and adjustable lighting for CY trainers is helpful in terms of moderate the atmosphere of CY yoga.
- 5) Complete Darkness May Not Be Desirable:
For the final relaxation phase of a chair yoga class, dimer lights be better if compared to complete darkness in the physical space. In general, for older adults with dementia practising CY poses in virtual space is feasible to tackle the issue of socially isolation of elderly community. A well designed chair-based yoga service, the strategy is properly use of lighting and technology both online and offline to generate better impacts for CY users, for example:
 - Reducing caregiver burden and stress if zoom CY class with lighting is properly designed;
 - Improving interoceptive body awareness; and
 - Reducing emotional loneliness.

6. Conclusion and Discussion

Based on the qualitative analysis on Chair Yoga Wellness Business Model, it is found that: Yoga Technology for Socialization via Chair Poses, Multimorbidity Care, Mental Focus for Dementia and Yoga Lifestyle for Functional Fitness are relevant to the model. Besides, technology (lighting and online CY training) is feasible to make chair yoga services more interactive and achieve **remote delivery, for example**, video conferencing platforms with Zoom to facilitate the delivery of chair yoga sessions directly to elderly participants' homes so as to overcome the issue of social isolation. For future research, it is recommended to collect quantitative data to support the findings mentioned in this paper for a CY wellness business model for psychosocial impacts (e.g., stress, loneliness) with SDG#3 wellness, #9 innovative use of technology as a strategy for home-based intervention to serve the silver community.

References

- Cajazeira, J. E. R. (2008, June). *Executive briefing of ISO 26000 guidance on social responsibility and HKQAA-HSBC CSR Index*. Paper presented at the Hong Kong Quality Assurance Agency (HKQAA) Symposium, Hong Kong.
- Kumar, N., & Singh, U. (2023). SDG3, good health and well-being: Status, achievement and yoga strategies. *[Book/Chapter—publication details needed]*.
- Brown, T. (2022). *Design thinking: Understanding how designers think and work*. Harper Business.
- Huang, X., Wang, L., & Li, J. (2022). Effects of mindfulness-based interventions on anxiety and depression in older adults: A systematic review. *Journal of Geriatric Mental Health*, 9(2), 101–110.
- Park, J., et al. (2022). Remotely supervised home-based online chair yoga intervention for older adults with dementia: Feasibility study. *Therapeutic Advances in Clinical Practice*, 48, 101617. <https://doi.org/10.1016/j.ctcp.2022.101617>
- Liu, Y., Chen, Y., & Zhang, H. (2023). The impact of blockchain-enabled health data sharing on older adult wellness: A systematic review. *Journal of Medical Internet Research*, 25(4), e45678. <https://doi.org/10.2196/45678>
- Park, J., et al. (2022). Remotely supervised home-based online chair yoga intervention for older adults with dementia: Feasibility study. *Clinical Therapeutics in Clinical Practice*, 48, 101617. <https://pubmed.ncbi.nlm.nih.gov/35738115/>
- Sherrington, C., Fairhall, N. J., Wallbank, G. K., Tiedemann, A., Michaleff, Z. A., Howard, K., Clemson, L., Hopewell, S., & Lamb, S. E. (2019). Exercise for preventing falls in older people living in the community. *Cochrane Database of Systematic Reviews*, 2019(1), CD012424. <https://doi.org/10.1002/14651858.CD012424.pub2>
- Tew, G. A., et al. (2024). Chair-based yoga programme for older adults with multimorbidity: Randomised controlled trial with embedded economic and process evaluations. *Health Technology Assessment*, 28(53), 1–154. <https://pubmed.ncbi.nlm.nih.gov/39259017/>
- The Gentle Years Yoga Trial. (n.d.). *Chair-based yoga for older adults with multiple long-term health conditions*. Northumbria University. *[Details needed for APA]*
- Veneri, D., & Gannotti, M. (2022). Take a seat for yoga with seniors: A scoping review. *OBM Geriatrics*, 6(2), 197. <https://doi.org/10.21926/obm.geriatri.2202197>

- Vetrano, D. L., Palmer, K., Marengoni, A., & Onder, G. (2020). Multimorbidity and functional decline: A systematic review. *JAMA Network Open*, 3(2), e1920751. <https://doi.org/10.1001/jamanetworkopen.2019.20751>
- Wang, K., et al. (2025). Association between yoga and multimorbidity: A nationwide study of 279,885 middle-aged and older adults. *BMC Public Health*, 25(1), 987. <https://doi.org/10.1186/s12889-025-15028-2>
- Ward, L., et al. (2025). Perceptions and experiences of chair-based yoga by older adults with multimorbidity: A qualitative process evaluation of the Gentle Years Yoga randomised controlled trial. *BMC Geriatrics*, 25(1), 5782. <https://doi.org/10.1186/s12877-025-05782-3>
- Yen, Y. C., Lin, C. H., & Chen, S. Y. (2021). Effects of seated yoga on anxiety and physical function in older adults: A pilot study. *International Journal of Geriatric Psychiatry*, 36(4), 589–597. <https://doi.org/10.1002/gps.5462>
- Yeung, S. M. C., & Wong, F. C.-C. (2022). Green circular economy: An educational model to transform. *Corporate Board: Role, Duties and Composition*, 18(3), 15–23. <https://doi.org/10.22495/cbv18i3art2>
- Government of Hong Kong. (2024). *Policy address supplement*. https://www.policyaddress.gov.hk/2024/public/pdf/supplement/supplement-08_en.pdf
- United Nations Environment Programme. (n.d.). *Green economy*. <https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-economy>
- Yeung, S. M. C. (n.d.). *From wellness via creation to sustained business with impacts*. Artwork Gallery. <https://artworkgallery.net/articles/dr-shirley-m-c-yeung-from-wellness-via-creation-to-sustained-business-with-impacts/>
- Ecohumanism. (n.d.). *Article 6603*. <https://ecohumanism.co.uk/joe/ecohumanism/article/view/6603>
- Global Steering Group for Impact Investment. (n.d.). *Impact measurement and management (IMM): Impact investing's evolving ecosystem*. <https://www.gsgimpact.org/resources/gsg-impact-publications-and-reports/impact-measurement-management-imm-impact-investing-s-evolving-ecosystem/>
- News Medical. (2022, July 28). *Online chair yoga intervention found to be convenient for socially isolated older adults with dementia*. <https://www.news-medical.net/news/20220728/Online-chair-yoga-intervention-found-to-be-convenient-for-socially-isolated-older-adults-with-dementia.aspx>
- Andiappan Yoga. (2016, February). *Asana Journal*. <https://www.andiappanyoga.com/product/asana-journal-feb-2016/>
- Verywell Fit. (n.d.). *Yoga poses for hamstrings*. <https://www.verywell.com/yoga-poses-for-hamstrings-4045013>
- The Good Economy. (n.d.). *Navigating impact measurement and management (IMM)*. <https://thegodeconomy.co.uk/navigating-impact-measurement-and-management-imm/>
- Ecohumanism. (n.d.). *Article 6873*. <https://ecohumanism.co.uk/joe/ecohumanism/article/view/6873>
- Bayes Business School. (n.d.). *Lighting and work performance*. https://www.bayes.citystgeorges.ac.uk/__data/assets/pdf_file/0004/363217/lighting-work-performance-cass.pdf