

Systems Theory; a Science of Complexity, Osteopathy; a Practice of Complexity. Are They Compatible?

1. Introduction

Systems Theory (ST) offers a structured methodology for comprehending complexity, emphasizing the interactions within a system and the systems interactions with its environment. Applied across various fields, ST provides tools for deciphering intricate systems. While Osteopathy regularly references ST so far it has not engaged fully in the paradigm of ST and what it might have to offer. Through Systems Theory Management (STM) - a novel practical framework of ST - this study sought to initiate an exploration into how ST might be a strong support for how osteopaths perceive and manage holistic health complexities.

2. Study Objective

This study explored and reflected upon the application and sensemaking of a novel STM approach to healthcare management adapted to osteopathy. It assessed how this approach could enable practitioners in clinical practice.

- What role might STM play in osteopathic care?
- How do osteopaths view STM in the context of their clinical work? And beyond?

3. Methods

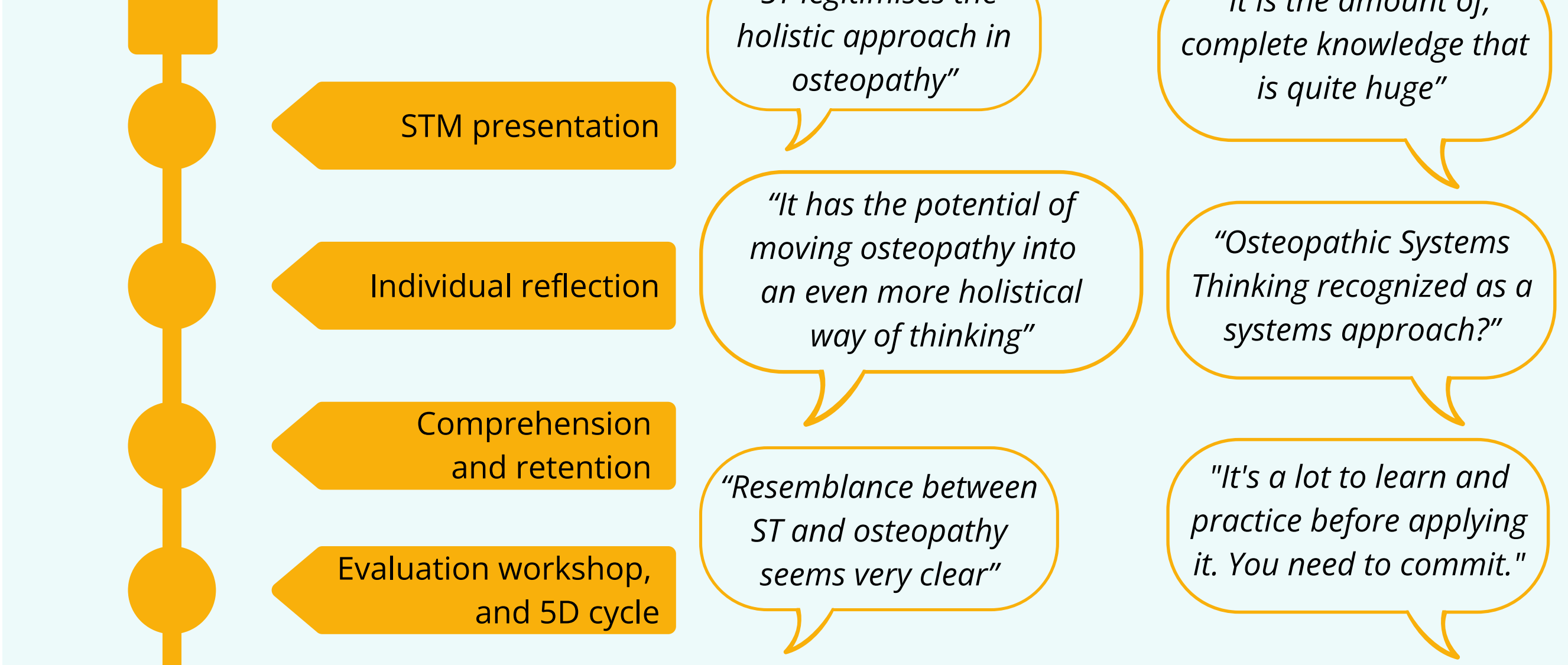
Utilizing Participatory Actions Research (PAR), this study facilitated a holistic exploration of STM's applicability in osteopathy.

- Inclusivity: All participants, including the researcher, contributed to sense-making.
- Action Phase: Designed to extract insights from diverse perspectives (teachers, participants, time progression, individual and collaborative insights).
- Analysis: Timeline and content assessments to discern the developmental trajectory during the action phase and offerings to future iterations.

4. Experiment

1. **Introducing STM:** Participants were acquainted with a tailored STM approach relevant to osteopathic contexts.
2. **Collaborative Sensemaking:** Initial discussions post-presentation reflect edon newly acquired knowledge.
3. **Individual Reflections:** Post-treatment sessions featured open-ended questionnaires to gather insights on STM's clinical relevance, sensemaking, comprehension, and retention.
4. **Collaborative Evaluation:** post-presentation and treatment sessions, a collective workshop evaluated STM's applicability in clinical settings.
5. **Future Prospects:** An Appreciative Inquiry 5D cycle, chosen for evaluation, explored STM's future implications in osteopathy.

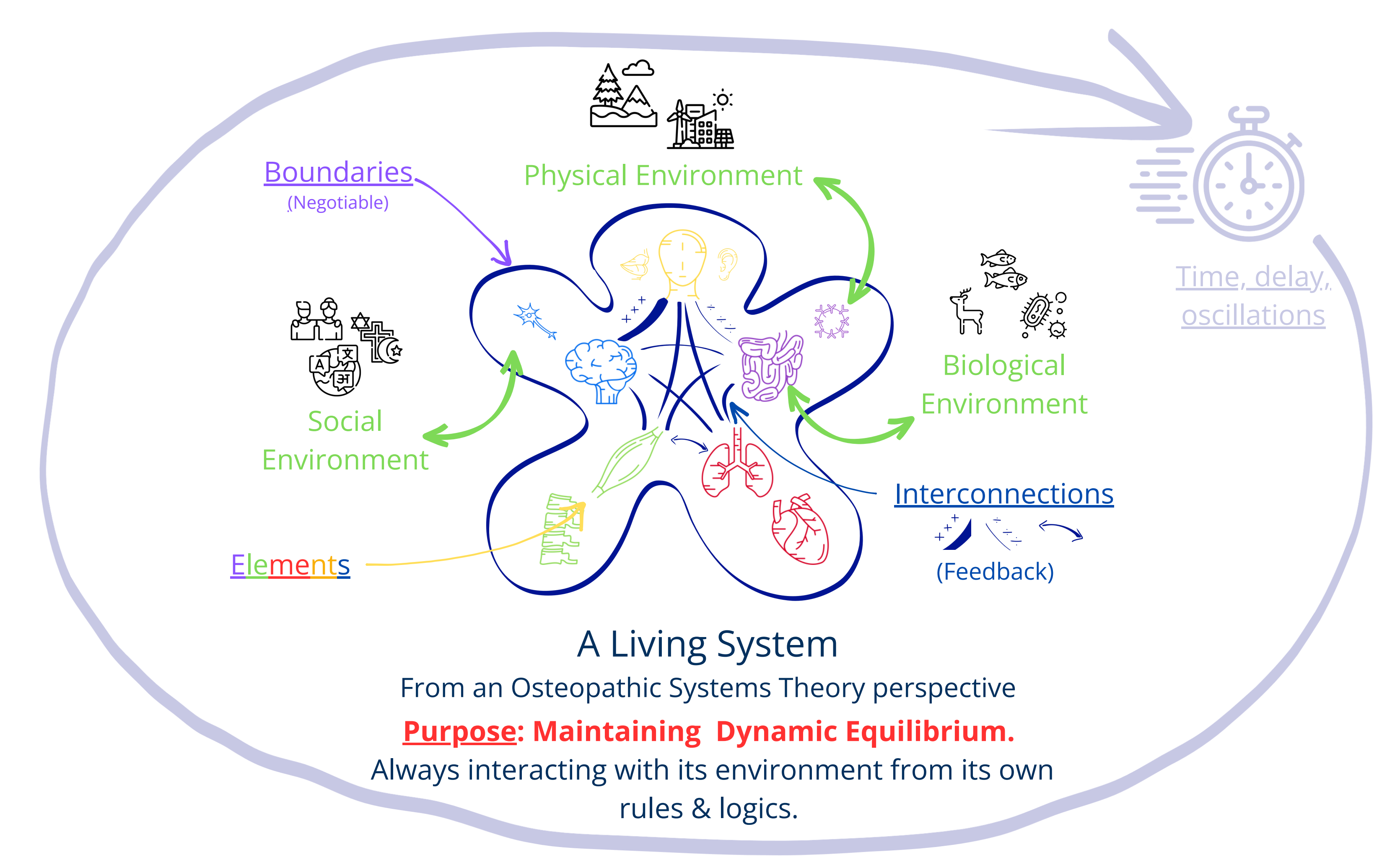
5. Themes



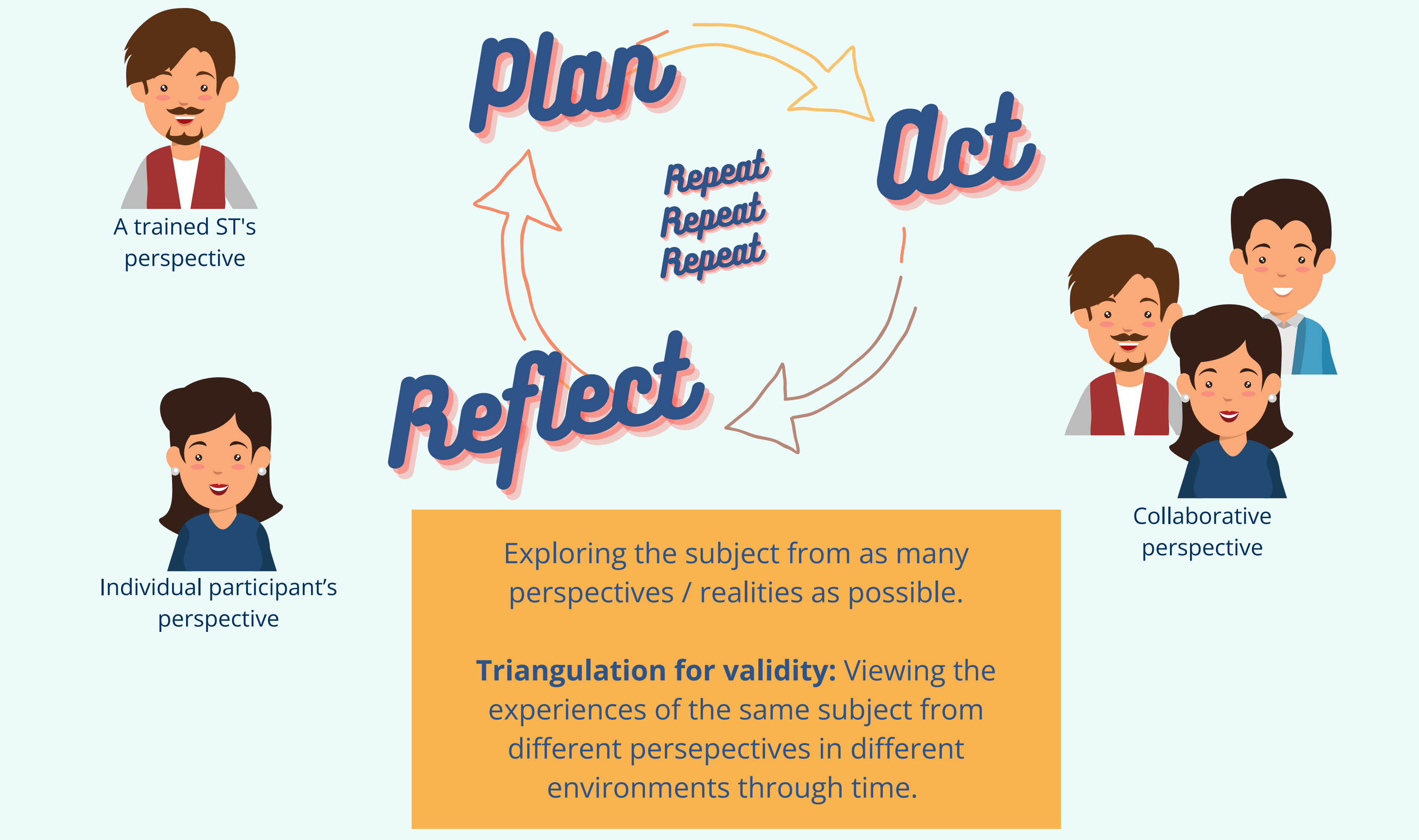
6. Future Recommendations:

While this study represents the first cycle of action research, preliminary findings highlight the promise STM holds in enriching a potential osteopathic systems thinking paradigm. By synthesizing the holistic principles of osteopathy with the structural methodology of STM, the potential emerges for a unified, robust approach to managing health complexities supporting a synthesis of the theories, approaches and tools applied.

A Living System in Dynamic Equilibrium



Participatory Action Research



Examples of Systems Theory in Osteopathy

The **Cynefin** framework by David Snowden (2002) is connected to complexity science; an extension of ST. It has found its way into osteopathy through authors like; Lunghi and Baroni (2019), Mayer and Standen (2018), Zegarra-Parodi, Esteves, Lunghi, Baroni, Draper-Rodi and Cerritelli (2021)

The **Biopsychosocial** approach, while debated by some, remains widely utilized and is deeply anchored in the principles of General Systems Theory (GST), as noted by Engel (1977).


Patient Centered Care. Sturmberg, a strong proponent of complexity science and ST, offers much thoughts to the realm of Patient Centered Care from a ST perspective (Sturmberg 2018).

Enactivism is closely connected to ST especially through the role of Francisco Varela in both Enactivism and Autopoiesis (Varela, F. J., Rosch & Thompson 2016). In recent times it has been presented to osteopathy by several contributors: Shaw, Abbey, Casals-Gutiérrez and Maretic (2022), Esteves, J. E., Cerritelli, Kim and Friston (2022), Cerritelli, F. and Esteves (2022) amongst others.

Participatory Action Research (as mentioned in the PROCare Survey 2023) is an iterative research method focused on solving real-world problems while simultaneously allowing for reflection and learning. It involves collaboration between researchers and participants to co-create knowledge and enact meaningful change. It originates out of ST by Kurt Lewin (Schein 1996, Lewin 1947).

Cybernetics is to some extent also presented in osteopathy by Hewitt (1964), and Tyreman (Mayer & Standen 2018 p. 191). Though not explicitly expressed as 2nd order Cybernetics - an evolution of cybernetics may be even more fitting for osteopathy. 2nd order Cybernetics deals amongst others with feedback mechanisms in living systems. It has influenced the development of autopoiesis and both are today integral parts of ST (Hammond 2010), (Ramage & Shipp 2020).

Do you want to learn more? Do you want to be part of the next iteration of the action research? [Use the QR code.](#) Reference list is also available.



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