


Pilot study of a serious board game intervention to facilitate narrative identity reconstruction in mental health recovery

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Abstract

This quasi-experimental study explores the effects of a narrative coaching board game intervention aimed at enhancing participants' sense of self-mastery as part of facilitating narrative identity reconstruction. Three mixed analyses of variance compared differences between clinical ($n=31$) and non-clinical ($n=31$) groups over time on a measure of mastery. There were no significant group-by-time interaction effects, but both groups demonstrated a statistically significant improvement in mastery over time. From a complex adaptive system perspective, changes may indicate adaptive growth in recovery. A serious board game may be a useful way of facilitating narrative identity reconstruction in recovery.

Keywords

complex adaptive system, mental health recovery, narrative identity, self-mastery, serious board game

Impact and implications

This study found that all participants demonstrated a statistically significant improvement in the sense of self-mastery from pre-to-post board game play. Notably, the clinical group improved on par with the non-clinical group even though starting from a lower point. The findings are important as they suggest that people in recovery have the ability to improve their sense of self-mastery as part of adaptive growth, and using a narrative coaching board game may be a useful way of harnessing this potential.

The process of mental health recovery is a complex phenomenon. Recovery refers to the idea that people with severe and persistent mental illness can pursue psychological well-being beyond the limitations of chronic illness (Anthony, 1993; Rogers et al., 2005; Slade and Longden, 2015). Recovery processes are, by nature, individual and non-linear with unique developmental pathways and complex characteristics as part of basic human adaptive growth (Anthony, 1993; Deegan, 2001; Slade, 2010). Non-linear change in recovery is poorly understood and is a difficult concept to apply in recovery-oriented healthcare. A need exists for novel approaches that focus on investigating those processes (Graci et al., 2018; Katerndahl, 2016;

Sturmberg, 2016). Linking the key recovery process of narrative identity reconstruction to the complex processes of adaptation and adaptive growth may be a fruitful approach (Kerr et al., 2019; Rudnick, 2012). Adaptive growth is a process that reframes the experience of illness as an opportunity to experience personal transformation through overcoming difficulties and finding renewed purpose and meaning in life (Frank, 1995; Slade et al., 2019).

Recovery is an intentional, self-directed endeavour that builds on hope, personal strengths and valued goals and is characterised by a growing sense of agency where the individual discovers a new world of possibilities (Deegan, 1996; Drake and Whitley, 2014). It comprises various components and processes such as building hope, taking responsibility, gaining a sense of control in life and building a positive identity (Andresen et al., 2006). Creating individual

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recovery stories aligned with a positive identity is central to mental health recovery (Llewellyn-Beardsley et al., 2019; Nurser et al., 2018).

Reconstructing narrative identity, to address the loss of sense-of-self and identity that often occurs in mental illness, is a key task for people in recovery (Hartog et al., 2017; Wisdom et al., 2008). Narrative identity refers to the internal, evolving life story that individuals construct by integrating stories related to their past, present and future to provide their lives with coherence, meaning and purpose (Bauer et al., 2008; McAdams, 1985, 2018). The challenge is to narrate a personal story characterised by an empowered, self-determined protagonist where illness is just one aspect of a complex, evolving self that can intentionally choose to pursue well-being in recovery. It is a process of personal transformation and adaptive growth (Davidson et al., 2005; Lysaker et al., 2001) that is linked to transformational narrative processing, a meta-cognitive, reflexive process where the person openly explores difficult life experiences and finds positive resolution (Pals and McAdams, 2004).

Different notions of identity entail different approaches to understanding and facilitating narrative identity reconstruction. Conceptions of identity encompass both unitary (core self) and plural (multiple selves) perspectives, which have contrasting views on process and change in identity formation. The unitary self is based on the assumption of stability of identity, in which change (if at all) is gradual and incremental. The plural self is fluid, malleable, sensitive to context and dynamically constructed (as a mental construct) in the moment, and identity change is more likely to occur suddenly (Oyserman et al., 2012). The experience of mental illness is most helpfully understood from a constructivist perspective (Slade, 2009, 2012) where narrative identity reconstruction entails an emerging process that combines both constancy and change during which the individual exists in a state of continuous construction and reconstruction (Cox and Lyddon, 1997).

Higher levels of personal agency (perceived ability to affect change in one's life) in narrative identity are strongly associated with improved recovery (Adler et al., 2016; Brown, 2008; Friedli, 2009; Nurser et al., 2018). Self-mastery, a central aspect of agency, refers to people's sense of control over their lives with enhanced insight into their personal identity and the purpose and meaning of their lives (Adler, 2012; McAdams, 1985; McAdams and McLean, 2013). Self-mastery is a universal adaptive capacity (Benight and Bandura, 2004; Little et al., 2006) enabling people to play a part in their own adaptive growth (Bandura, 2001, 2006; Little et al., 2006).

Agency and self-mastery are represented as major themes in the life story model of identity (LSMI), a widely used theory of narrative identity (McAdams, 1985, 2018). The LSMI focuses on the storytelling elements of the individual's life story and provides a template for understanding narrative identity reconstruction. Agentic narrative identity and

adaptive growth are epitomised in the hero's journey monomyth (Booker, 2006; Campbell, 1968; Williams, 2019), which is widely used as a metaphor for recovery (Foundations Recovery Network, 2018; Lamprell and Braithwaite, 2016). The hero's journey term relates to both males and females (Campbell, 1968).

As a non-linear phenomenon, narrative identity reconstruction is highly suited to investigation from a complex adaptive system (CAS) perspective. The term CAS refers to the multifaceted non-linear dynamic nature of the individual, the evolving developmental manner of personal change over time and the interconnectedness of the various parts that comprise the individual (Guastello and Liebovitch, 2009; Guastello, 2012). The principal signature of a CAS is multiplicity of possible outcomes whereby the individual has adaptive capacity to choose, explore and adapt in response to demand (Nicolis and Rouvas-Nicolis, 2007). Humans have inherently high levels of adaptive capacity, which allows them to proactively shape their life course. This affords them a sense of personal agency and identity (Little et al., 2006). People can enhance their adaptive capacity by engaging in personal growth exercises such as developing creative flexibility in decision-making and problem-solving (Mahoney and Granvold, 2005; Mobus and Kalton, 2015).

Intentional change theory (ICT; Boyatzis, 2006; Boyatzis and Akrivou, 2006; Boyatzis and McKee, 2006) is a coaching framework for sustainable (i.e. enduring) personal change aligned with narrative identity reconstruction. ICT uses the lexicon of CASs to describe personal change and operationalise complexity principles in intervention. The goal in ICT is for the individual to actualise a desired ideal self (positive emotional attractor) conceptualisation in the context of a valued goal. This involves a shift away from an undesired current self (negative emotional attractor).

Narrative coaching is ideally suited for narrative identity reconstruction in recovery (Bora, 2010; Cavanagh and Buckley, 2014). It is a transformational approach that assists people to revise their personal narratives to see and experience themselves in novel ways (Drake, 2010, 2017, 2018). Personal transformation can be facilitated by the use of reflexive questioning which promotes people's ability to think in the moment about their responses, reframe difficulties in a novel manner and find solutions to their problems (Hawkins and Smith, 2014; Oliver, 2005). Coaching models and tools are often used to facilitate personal transformation (Biswas-Diener, 2010). The use of a serious board game holds potential for transformational identity change. The term 'serious game' refers to games that, while entertaining, model real-life situations and/or have a useful outcome (Fitzgerald and Kirk, 2013). Board games promote agency whereby players experience choice of response and a sense of control over the game's outcome (Fullerton, 2018). When the board game focuses on identity, it allows them to develop new concepts of self and learn new,

adaptive skills that they can use in real life (Mitgutsch, 2011; Wasserman and Banks, 2017).

The main focus of this article is narrative identity reconstruction during recovery from severe and persistent mental illness. It outlines a narrative coaching approach, using a serious board game as a coaching tool, designed to improve participants' sense of self-mastery as a means of facilitating narrative identity reconstruction in recovery. This study is aimed to (1) determine the effects of a narrative coaching board game intervention aimed at facilitating self-mastery improvement as part of narrative identity reconstruction in recovery and (2) clarify how the effects of the narrative coaching board game intervention can be understood from a CAS perspective.

Method

Board game

Conceptual framework. This study uses a conceptual framework in which theories and models related to recovery as a complex process of adaptive growth are integrated in a narrative coaching approach. The theoretical framework is an integration of narrative constructivism (Bruner, 1991; McLeod, 2004), LSMI (narrative identity) theory (McAdams, 1985, 2018) and CAS theory (Butz, 1997; Pincus et al., 2018). The theories have the common theme of narrative identity as a non-linear phenomenon. Theoretical integration posits that (1) the individual is an evolving self who constructs an evolving narrative identity, underpinned by non-linear dynamic processes of change, (2) LSMI theory provides a way of organising the person's evolving narrative identity and (3) CAS theory provides a means of understanding the non-linear processes of narrative identity construction. Further details regarding the theoretical framework underlying the development of the board game can be found in Kerr et al. (2019).

The board game was developed specifically for the narrative coaching intervention. It was based on established principles of game design that included detailed conceptualisation and iterative development (i.e. test, analyse, refine, repeat) followed by a play-testing programme to ensure the game achieved its intended aim (Fullerton, 2018). A board game coaching manual was developed (available from the corresponding author).

Study design

The study is a pretest–posttest non-equivalent group quasi-experimental design.

Participants

The study recruited a clinical group comprising 31 individuals (18 males, 13 females) with mental disorders and a

non-clinical group comprising 31 individuals (17 males, 14 females) without mental disorders. For the clinical group, participant inclusion criteria were adult age (over 18), formal diagnosis of mental illness, actively participating in recovery (according to peer support workers), and mental health is currently sufficiently stable (as determined by mental health professionals) to participate in the board game intervention. The experience of persistent mental illness was the unifying characteristic of clinical group participants. Participants were diagnosed with schizophrenia (eight males, four females), bipolar disorder (two males, three females), depression (four males, four females), anxiety (two males, two females) and post-traumatic stress disorder (two males). Participants' ages ranged from 25 to 62 (mean=44, standard deviation (SD)=10.2). Clinical group participants were actively involved in recovery, with some being involved in recovery for many years and others relatively new to the process.

For the non-clinical group, inclusion criteria were adult age (over 18), no formal diagnosis of mental illness and taking part in postgraduate psychological studies/training or already working as a professional psychologist. A psychology background (in training or qualified) was the unifying characteristic of participants. The group was composed of postgraduate psychology students (17), intern psychologists (10) and professional psychologists (4). Participants' ages ranged from 24 to 58 years (mean=34, SD=9.7).

A purposive sampling procedure was used to select the study sample. Clinical group participants were purposively selected (telephonically, face to face) via non-governmental mental health services organisations. Non-clinical group participants were purposively recruited via the University's School of Psychology.

The study was approved by the University's Human Research Ethics Committee (HE10/439). After the participants were given a complete description of the study, written informed consent was obtained.

Data collection

Measures. *Sense of Mastery (SM) scale.* The Sense of Mastery (SM; Pearlin and Schooler, 1978) measures the extent to which people regard their life-chances as being under their own control in contrast to being fatalistically ruled. It measures global sense of personal control. The SM comprises seven items (e.g. 'What happens to me in the future mostly depends on me'). Respondents rate their agreement to each statement on a five-point Likert-type scale ranging from 1='strongly agree' to 5='strongly disagree'. Two items are reverse scored and items are summed to create an overall score with higher scores indicating greater sense of mastery.

The SM has shown satisfactory psychometric properties with regard to both validity and reliability (Pearlin et al.,

1981; Rosenfield, 1992). Factor loadings for the seven items loading on the mastery scale revealed internal consistency reliability. The five negatively worded items have factor loadings ranging from 0.76 and 0.56. The two positively worded items both have factor loadings of -0.47 (Pearlin and Schooler, 1978). Correlation between time 1 and time 2 (4 years) was $.44$ (Pearlin et al., 1981). The SM has good convergent validity in diverse populations (Marshall and Lang, 1990) and strong face validity (Brady, 2003). Cronbach's alpha for the SM items was $.84$, $.89$ and $.90$ in this study.

The Adult Trait Hope Scale. The Adult Trait Hope Scale (ATHS; Snyder et al., 1991) measures hope as a positive motivational state that is based on an interactively derived sense of successful (1) agency (i.e. goal-directed determination) and (2) pathways (i.e. planning to meet goals). Agentic thinking is a belief in one's capacity to initiate and sustain actions and pathways thinking is a belief in one's capacity to generate routes to reach goals. The ATHS contains 12 items. Four items make up the agency subscale (e.g. 'I energetically pursue my goals'), four items make up the pathways subscale (e.g. 'There are lots of ways around any problem') and four items are fillers (e.g. 'I feel tired most of the time'). Participants respond to each item using an eight-point Likert-type scale ranging from 1 = 'definitely false' to 8 = 'definitely true'. Researchers can either examine results at the subscale level or combine the two subscales to create a total hope score. In this study, subscale scores were used by summing items for each scale.

The ATHS has demonstrated good levels of reliability (Stoner, 2004) with Cronbach's alphas of $.74$ – $.84$ for overall hope, $.71$ – $.76$ for agency thoughts and $.63$ – $.80$ for pathway thoughts. Test-retest statistics were reported as being $.80$ or above for time periods of up to 10 weeks (Snyder et al., 1991). Agency and pathways are positively correlated, with the typical magnitude of correlation being about $.40$ (Snyder et al., 1991). Cronbach's alphas for the agency subscale and the pathways subscale were $.74$, $.81$, $.76$ and $.92$, $.93$, $.93$, respectively, in this study.

Procedure

The game was played twice, a fortnight apart, with each game lasting 60–90 minutes. Two games separated by a 2-week interval were selected in order to allow participants time to practice skills learned in the first game. Measures were administered at three time points: T1 – 2 weeks before the game was played for the first time; T2 – immediately before the game was played for the first time and T3 – 2 weeks after that, immediately following the second playing of the game. Thus, two pre-game baseline assessments were conducted.

For the clinical group, the research sites were at a community adult mental health service setting, participants' workplaces or their homes. For the non-clinical group, the

research sites were at the University campus, participants' workplaces or their homes. After participants expressed an interest in participating, a mutually agreed time and location was established.

Data analysis

Data collected in the board game intervention were analysed by means of SPSS version 25 (IBM Corp., 2017). A series of three, 2 (group) by 3 (time) mixed analyses of variance (ANOVAs) were conducted to compare the differences between a clinical group and a non-clinical group over time on measures of mastery and the hope subscales of agency and pathways. Step-down pairwise comparisons used a Bonferroni correction. Self-mastery is the primary outcome variable of interest with the hope subscales of agency and pathways being considered secondary variables that represent markers of mental health recovery.

Results

Mastery

Assumptions were tested for the mastery variable and there were no outliers, as assessed by examination of studentized residuals for values greater than ± 3 . Mastery scores were normally distributed (Shapiro–Wilk test $p \geq .05$ and normal Q–Q plot). There was homogeneity of variance across groups and homogeneity of covariance, as assessed by Box's test of equality of covariance matrices. Mauchly's test of sphericity indicated that the assumption of sphericity was met for the two-way interaction ($\chi^2 = 4.48$, $p = .11$).

There was no statistically significant interaction between group and time on the measure of mastery, $F(2, 120) = 0.20$, $p = .80$, partial $\eta^2 = .003$. There was a significant main effect of time, $F(2, 120) = 13.18$, $p < .001$, partial $\eta^2 = .180$. The main effect of group was not statistically significant, $F(1, 60) = 3.51$, $p = .07$, partial $\eta^2 = .055$.

Agency

There were no outliers, as assessed by examination of studentized residuals for values greater than ± 3 . Agency scores were normally distributed. There was homogeneity of variance across groups. There was heterogeneity of covariance, as assessed by Box's test of equality of covariance matrices ($p = .001$). Mauchly's test of sphericity indicated that the assumption of sphericity was violated for the two-way interaction, $\chi^2 = 9.759$, $p = .008$; therefore, a Greenhouse–Geisser correction was used. There was no statistically significant interaction between group and time on the measure of agency, $F(1.735, 104.126) = 1.37$, $p = .26$, partial $\eta^2 = .022$. There was a significant main effect of time, $F(2, 120) = 13.08$, $p < .001$, partial $\eta^2 = .179$. The main effect of group was also statistically significant, $F(1,$

Table 1. Means, SDs and repeated-measures ANOVA results.

Measure	Group	n	Baseline (T1)		Pre-game (T2)		Post-game (T3)		Tests of within-subject effects		
			Mean	SD	Mean	SD	Mean	SD	F(2, 60)	p	η_p^2
Mastery	Clinical	31	24.16 _b	5.55	25.03 _a	5.13	26.19 _{a,b}	5.16	7.086	.002	.191
	Non-clinical	31	26.26 _a	2.92	27.06 _b	3.45	27.87 _a	3.25	6.140	.004	.170
Agency	Clinical	31	21.94 _a	5.66	23.39 _b	5.25	24.48 _a	4.61	7.035	.002	.190
	Non-clinical	31	24.97 _b	3.33	25.23 _a	3.12	26.45 _{a,b}	3.10	7.775	.001	.206
Pathways	Clinical	31	24.74 _a	5.22	25.35 _b	5.12	26.00 _a	5.13	3.459	.038	.103
	Non-clinical	31	25.29 _b	3.38	25.74 _a	3.04	27.16 _{a,b}	3.89	9.947	.001	.249

ANOVA: analysis of variance; SD: standard deviation.

Means in the same row sharing subscripts are significantly different at $p < .05$.

60)=5.24, $p = .026$, partial $\eta^2 = .080$. Independent-samples t tests revealed a statistically significant difference between the groups at T1. The clinical group had lower agency (mean=21.94, SD=5.66) than the non-clinical group (mean=24.97, SD=3.33), a statistically significant difference, 95 per cent confidence interval (CI)=[-5.41, -0.66], $t(60) = -2.57$, $p = .01$. There were no significant differences between groups immediately before playing the game (T2) or post-game (T3) (both $p > .05$).

Pathways

There were no outliers, as assessed by examination of studentized residuals for values greater than ± 3 . Pathways scores were normally distributed. There was homogeneity of variance across groups and homogeneity of covariance confirmed through Box's test of equality of covariance matrices ($p = .14$). Mauchly's test of sphericity indicated that the assumption of sphericity was met for the two-way interaction, $\chi^2 = 5.18$, $p = .08$. There was no statistically significant interaction between group and time on the measure of pathways, $F(2, 120) = 0.72$, $p = .49$, partial $\eta^2 = .012$. There was a significant main effect of time, $F(2, 120) = 12.22$, $p < .001$, partial $\eta^2 = .169$. The main effect of group was not statistically significant, $F(1, 60) = 0.43$, $p = .52$, partial $\eta^2 = .007$.

Post hoc analyses

All participants evidenced statistically significant improvement on scores of mastery, agency and pathways in the intervention. Since we were particularly interested in the results for the clinical sample and there were differences between groups for agency at T1, a series of repeated-measures ANOVAs with paired comparisons were conducted separately to explore where differences occurred over time. A summary of the results of the repeated-measures ANOVAs is provided in Table 1. For the clinical sample, their mastery scores were not significantly different between baseline measures (T1, T2), but post-game scores (T3) were significantly higher compared to both baseline

measures. Their agency scores were not significantly different between baseline measures (T1, T2), but post-game scores (T3) were significantly higher compared to baseline measure T1. Their mastery scores were not significantly different between baseline measures (T1, T2), but post-game scores (T3) were significantly higher compared to baseline measure T1. For the non-clinical sample, their mastery scores were not significantly different between baseline measures (T1, T2), but post-game scores (T3) were significantly higher compared to baseline measure T1. Their agency scores were not significantly different between baseline measures (T1, T2), but post-game scores (T3) were significantly higher compared to both baseline measures. Their pathways scores were not significantly different between baseline measures (T1, T2), but post-game scores (T3) were significantly higher compared to both baseline measures.

Discussion

Self-mastery improvement: transformative personal change as adaptive growth

As the focus of this article is on people in recovery, the results are discussed predominantly from the clinical group perspective. The finding of no statistically significant interaction between group and time on the variables of interest suggests that the pattern of results was similar for the clinical and non-clinical groups. Notably, the clinical group improved on par with the non-clinical group even though starting from a lower point. Finding a consistent effect for time suggests that improvements in self-mastery coincided with playing the board game. This implies that people in recovery have the ability to improve their sense of self-mastery as part of adaptive growth. This is consistent with the board game design assumption that self-mastery as a universal, agentic process of human functioning is available to all people as adaptive capacity. Participants' improvement in self-mastery as a core aspect of personal agency would likely confer on them a heightened sense of control in life. Potentially, they could intentionally choose

to narrate an agentic recovery journey and construct a self-determined narrative identity in future.

Although the clinical group evidenced significant change on the variables of interest in the board game intervention, their scores were generally lower than the scores of those in the non-clinical group. This was unsurprising, given the different group characteristics, particularly the experience of mental illness. The groups improved in the board game intervention with roughly parallel improvements in their outcome measures from T1 to T3. Participants' significant change on the variables of interest as a group does not imply that all individuals evidenced such an improvement. There was an individual variation in both scores and patterns of change from baseline to post-intervention both within and across variables.

Although the study design does not allow any causal conclusions about the role of playing the board game on changes in self-mastery, the presence of a stable baseline for the clinical group does reduce the probabilities of time, expectancies or measurement effects accounting for the change. In short, there were no significant differences in self-mastery across the two baseline measurement points prior to playing the game. The increase in self-mastery occurred post-test (T3) after the game had been played on the second occasion. Participants' transformative change after the 2-week (pre–post) intervention period suggests that people in recovery can make rapid and potentially sustainable change in their narrative identity status. That such change coincided with playing the board game suggests that this may be a useful tool to facilitate the development of self-mastery.

From a CAS perspective, participants' significant improvement in mastery scores in the board game intervention can be understood as evidence of second-order, transformative personal change. Theoretically, this is viewed as more often sudden change in contrast to first-order change which is viewed as minimal, gradual and continuous adaptations while remaining organised around stable, dominant attractors (i.e. habitual patterns of functioning; Gelo and Salvatore, 2016; Salvatore et al., 2015). This suggests that participants experienced adaptive growth as part of their narrative identity reconstruction in the board game intervention. The evidence for people with mental illness to make sudden gains in other domains is not new. For example, Tang and DeRubeis (1999) examined the depression severity time courses of 61 cognitive-behavioural therapy (CBT) patients over 12–20 treatment sessions. Half of the patients experienced large symptom improvements in a single between-session interval. Patients' sudden gains accounted for 50 per cent of their improvement. Substantial cognitive changes were observed in the therapy sessions preceding sudden gains, but few cognitive changes were observed in control sessions, suggesting that cognitive change in the pre-gain sessions triggered the sudden gains. Patients who experienced sudden gains were less depressed

than the other patients post-treatment and remained so 18 months later. Similar sudden gains have been identified for other disorders such as obsessive-compulsive disorder (e.g. Heinzl et al., 2014).

The recovery journey board game: theorised mechanisms of change

The board game was created drawing on CAS, ICT and LSMI (see Table 2). The following describes the theorised mechanisms of change based on these guiding theories.

At the outset of the board game, the key process for participants was to conceptualise an affectively compelling ideal self as a personal life vision. This was composed of an image of a valued real-life goal as a context for their board game journey, instilling hope that it may be attained, and awareness of inner attributes that they could draw upon to attain it (see Table 2). This process was critically important as the ideal self is the emotional driver of sustainable personal change (Boyatzis and Akrivou, 2006). Establishing a goal and harnessing inner attributes to attain it provided motivation to both initiate and sustain their effort in the board game. Participants engaged in imaginal rehearsal and values clarification exercises to elicit the purpose and meaning that underpinned their choice of goal, learned about agentic archetypes and attributes that they could draw upon (e.g. Warrior: discipline, determination, courage, skills), and learned and practised self-mastery skills (i.e. applied mindfulness) that they would use in the game. Particular emphasis was placed on assisting participants to create a very clear imaginal picture of their ideal self and make a positive emotional 'connection' with it, in order to develop the necessary motivation to pursue sustainable personal change.

Participants' current self negative emotional attractor at the outset of the game was a unique system state that would influence their receptivity to change and outcome in the game. This is the process of sensitive dependence on initial conditions. A CAS must be receptive to perturbation (i.e. destabilisation) for change to occur. CASs are highly resistant to change, and sufficient perturbation is required to initiate the non-linear sequence of change that allows for system re-organisation and the formation of novel attractors (Gelo and Salvatore, 2016; Salvatore et al., 2015). Given participants' change in the board game, it can be assumed that perturbation generated by the game play was adequate.

At the remaining story steps in the board game recovery journey, the key process for participants was to successfully complete the narrative identity challenges (see Table 2). This entailed participants engaging in a sequence of coaching questions in which they used the self-mastery skills that they learned and practised in the preparatory step of the game. Participants were required to demonstrate increased awareness of self and context and attempt to identify

Table 2. An overview of the narrative coaching board game.

Heroes and heroines: the recovery journey board game	
Steps in the board game (heroic journey)	<p>1. The call Protagonist faces a life difficulty and decides to go on a journey to address it.</p> <p>2. Threshold Protagonist leaves his or her comfort zone and engages in the recovery journey.</p> <p>3. Road of trials Protagonist is fully engaged in the journey and is tested in the process.</p> <p>4. Setback Protagonist is faced with a significant obstacle that must be overcome.</p> <p>5. Rising action Protagonist is immersed in the journey and faces many competing demands.</p> <p>6. Climax Protagonist must overcome his or her main personal limitation to succeed.</p> <p>7. The return Protagonist is changed as a person and shares his or her learnings with others.</p>
Challenges at each step (life story model of identity)	<p>Underlying beliefs <i>Challenge:</i> Choose beliefs that could best support you on your journey.</p> <p>Dominant attitude/s <i>Challenge:</i> Choose what attitude/s could best support you on your journey.</p> <p>Story turning points <i>Challenge:</i> Identify a possible main setback on your journey and consider how to overcome it.</p> <p>Managing aspects of self <i>Challenge:</i> Identify your life roles and consider how to manage them on your journey.</p> <p>Story high point <i>Challenge:</i> Identify your main personal limitation on the journey and consider how to address it.</p> <p>Personal growth <i>Challenge:</i> Reflect on your journey learnings and consider how to use them in future.</p>
Coaching process (intentional change theory)	<p>Game preparation Psych-education, choose goal, clarify values, imagine ideal self, learn and practise self-mastery skills.</p> <p>Game play The game-playing mechanism reflexive question sequence protocol used at all narrative identity challenges: 1. How would your ideal self address this challenge? 2. How is that different from the way you would currently address this challenge? 3. What qualities/strengths that you have could you draw upon to address this challenge? 4. What archetypes and qualities/strengths could you draw upon to address this challenge? 5. Pause and reflect. Based on the above discussion, what action/s can you take to address the challenge? (i.e. support those beliefs; support those attitudes; overcome that setback; manage your life roles; overcome your personal limitation; use your learnings)</p>

decisions and actions that might take them closer to their goal. This entailed transformational narrative processing.

The coaching aim at the story steps was to assist participants to successfully complete the challenges. Particular emphasis was placed on assisting participants to engage fully in the immersive ideal self role-play nature of the board game and respond with agency at the challenges. This was achieved by engaging participants in the game-playing mechanism (see Table 2), which can be viewed as a critical factor in facilitating participants' transformative change. The mechanism made synergistic use of the heroic journey metaphor, reflexive coaching questions and agentic archetypal resources. Explaining the nature and importance of the heroic journey steps and the associated aspects of narrative identity contextualised the challenges and related them to participants' chosen goal. Reflexive coaching questions required participants to take the perspective of their ideal self and repeatedly explore in depth how they could successfully attain their chosen goal. Facilitating participants' use of agentic archetypal attributes required them to explore inner resources and consider how they could use them to attain their goal.

Participants' ideal self positive emotional attractor likely would have strengthened and formed over time as they engaged in the narrative identity challenges. The challenges can be described as bifurcation points, which are places in non-linear change where a CAS is faced with alternative developmental pathways and must choose which direction to take. These were critical points in participants' board game journey as successful completion (i.e. agentic story construction) of the challenges moved them towards their goal. Formation of the ideal self positive emotional attractor involved self-organisation, where a CAS internally produces novel behaviour. Participants' transformative change occurred in a process of emergence where their ideal self attractor became dominant through repeated activation in the game-playing mechanism. This can be described as a phase shift, which refers to a sudden major qualitative difference in a system state. This phase shift could be represented by the significant change in mastery evidenced by participants' following completion of the board game.

Limitations of the study

The main limitation of the study is quasi-experimental research design which does not allow causal statements regarding playing the board game and changes in the study outcome variables. There is a need for a randomised controlled trial with participants being allocated to the board game intervention and a control group. An active control involving an alternative game of similar length that does not target mastery would be preferable. Nevertheless, the pre-post design of this study allowed for initial participant feedback and preliminary estimates of likely effect sizes for future study planning. Another limitation was that the

administration of the post-test occurred very close in time to when the game was played. Future research should also extend the follow-up period to ascertain whether changes in self-mastery are sustained over time or just remain proximal to playing the game. Also, the impact of an increased sense of mastery on actual behaviour was not measured and should be in follow-up studies.

A further limitation is use of the heroic journey as a narrative identity coaching model. The idea of relating to a 'hero' or 'heroine' is sometimes misconstrued as hero-worship or referring to someone with special powers and thus difficult to emulate. Also, not all mental health stakeholders are familiar with the concept and relevance of the heroic journey. To overcome these limitations, the board game design featured a pedagogical segment where the researcher (coach) briefly explained to participants the concept of the heroic journey in relation to the coaching intervention.

It is important to note that the findings do not suggest that participants underwent a holistic narrative identity reconstruction. Participants' transformative change relates to one aspect of their life (i.e. their chosen board game goal) and one aspect of their identity (i.e. self-mastery). However, this would likely have a positive impact on their identity overall (e.g. improved agency and pathways thinking).

Furthermore, it should be noted that clinical group participants were actively involved in recovery. Some had been in recovery for many years, while others were relatively new to the process, but they were all progressing in their recovery. It is unlikely that playing the board game would be suitable for people very early in recovery (moratorium) or in a mental health crisis.

Conclusion

Using a serious health board game as a narrative coaching tool appears to be a novel and effective way to improve people's self-mastery, a component of narrative identity reconstruction in recovery. The heroic journey offers a narrative coaching framework that frames adaptive growth in an accessible manner. Complexity theory offers a useful conceptual framework and language to understand the processes of psychological change that underpin narrative identity reconstruction. This approach has the potential to assist in changing the meanings individuals give to transition in their lives, potentially leading to a higher level of adaptive growth in recovery.

This study builds on prior findings by suggesting how self-mastery might be understood and facilitated from a complexity perspective. For practice, it offers a way for mental health professionals to facilitate their clients' narrative identity reconstruction in recovery. Future research should utilise an experimental design and determine what stage of recovery might be optimal for the timing of the intervention.

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