

Team coaching using LSP and team facilitation: a randomized control trial study measuring team cohesion and psychological safety

LSP and team coaching

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Abstract

Purpose – To date, little research has been undertaken to test the effectiveness of team coaching, with past work focusing on models, frameworks and competencies. This study aimed to examine the effectiveness of team coaching within real world organizational teams and its impact on individual perceptions of team cohesion and psychological safety.

Design/methodology/approach – A randomized control trial (RCT) using the comparable interventions: (1) team coaching (intervention) and (2) team facilitation (control) was employed with multiple teams and multiple facilitators, measuring the impact on team cohesion and psychological safety.

Findings – The data indicate participants engaging in the team coaching intervention made greater gains in terms of their individual perceptions of psychological safety and team cohesion than individuals who received the team facilitation intervention (T1–T2).

Practical implications – Facilitators should apply a team coaching approach when seeking to address issues of cohesion and psychological safety within workplace teams.

Originality/value – This study provides the first evidence, using an RCT method, of the effectiveness of team coaching as a workplace intervention for enhancing individual perceptions of psychological safety and team cohesion.

Keywords Team coaching, Team cohesion, Psychological safety, Randomized controlled trial (RCT), LEGO® Serious Play® (LSP)

Paper type Research paper

Introduction

Collaborating with others has been a common feature of work since industrialization moved production from the home to the factory and work moved away from the extended family

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Positional statement: Two of the authors are licensed psychologists with backgrounds in coaching research and the third a practitioner-researcher. The researchers have previously published coaching outcome and facilitation LSP research paper.

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group to biologically unrelated individuals coming together in a team to produce goods in exchange for a daily wage (Kozłowski, 2018). The industrial revolution of the 18th century brought not only a change in the geographical location and of group composition but also a change in processes. Machines were used to replace workers on some tasks; speeding up processes, increasing consistency of output and reducing cost (Mohajan, 2019). Secondly, greater specialization was introduced, moving workers from their role as a craft person making an individual object, towards a collective process, where individuals collaborated to produce an item, each focusing on one part of the task (Madieto *et al.*, 2020). The outcome of these societal changes is that teamwork is now at the heart of most modern workplaces, whether workers are engaged in physical manufacturing or knowledge creation (Salas *et al.*, 2020). As a result, understanding how team relationships, team processes and team outcomes can be improved should be a critical area of research for those interested in applied management.

Definitions

As in many areas of practice, there is a debate about the definitions, boundaries and functions of a “team”. Clutterbuck (2010) suggests that there are different forms of teams from stable teams where the purpose, tasks and membership are constant over a sustained period to evolutionary teams, where the tasks and people change over time. In reviewing the range of team definitions from the literature, two common features emerge. Firstly, they consist of more than one person: that is, they are a group. Secondly, a team is a particular form of group: one where its members share a common purpose or goal, which they are working to achieve together.

Coaching has grown significantly since 2000, with the past decade seeing a greater interest in collective coaching, specifically with teams. This interest has seen growth in publications on the theme of team coaching during the period 2010–2020 as well as the development by professional bodies of team coaching competencies and standards to support coach training and accreditation (EMCC, 2020; ICF, 2020). The majority of research contributions have focused on whether and how coaching can be adapted for teamwork. Different writers have explored definitions, models, frameworks, tools and case studies (for example: Clutterbuck, 2010; Hawkins, 2014). However, there has been a scarcity of empirical evidence evaluating the application of coaching in team settings.

Team coaching. One of the few attempts to conceptualize team coaching is a paper by Jones *et al.* (2019). Jones argued that team coaching had failed to offer a clear definition, making it hard to research or teach. We share this view, although recent work by professional bodies to define and establish competencies has significantly reduced the scale of the problem.

For this study, we define “team coaching” as: a partnering process using coaching methodology with a group of people that share a common purpose, to facilitate them reflecting on themselves, their relationships and context, and thereby identify new insights, actions and ways of being to achieve their common purpose.

What is distinctive in our definition is a desire to see team coaching as intra, inter and systemic: relating to the personal, the interpersonal and the team’s operation within a wider organizational, sector and cultural context: a multi-nested system. This definition reflects how team coaching, as well as coaching more generally, has developed as a systemic endeavour.

Team coaching effectiveness. Whilst there has been an active debate about definitions, competencies and training, this work has been informed largely by case study reports of practice (Hastings and Pennington, 2019; Widdowson *et al.*, 2020). A detailed review of the literature suggests an absence of studies exploring the impact of team coaching on team relationships, well-being or performance. Our systematic literature review failed to identify a single

randomized control trial or experimental design study examining the effectiveness of team coaching. Here, Hicks (2010) identified two case studies (Personnel Today, 2006; Rowland, 2010), which he reported in detail. Both papers argued that team coaching had a positive effect on the teams in receipt of the intervention, but with little supporting data analysis.

Peters and Carr's (2013) review of the literature reported on four team coaching models (for example, Hackman and Wageman, 2005), four empirical studies (for example, Buljac-Samardžić, 2012) and eight case studies (for example Carr and Peters, 2013).

While frequently cited as evidence, studies such as Heimbecker (2006), Anderson *et al.* (2008), Woodhead (2011) and Godfrey *et al.* (2014) adopted a strong experiential approach. For example, Heimbecker (2006) claimed benefits from team coaching in his unpublished university thesis, which examined the application of Hackman's theory to educational settings. He examined the use of coaching with the educational sector writing teams and compared the outcomes with non-coached writing teams and noted differences were shown through the quality of the outputs produced by the coach team. Thus, he argued, providing support for the Hackman's thesis of the value of coaching.

Similarly, Anderson *et al.* (2008) claimed benefits from a consulting engagement their firm delivered at Caterpillar, with "90% of senior teams", who experienced coaching as part of a three-phase initiative which included peer feedback, individual coaching and group coaching. The consultants noted that the intervention helped the team deal with their group habits, gaining deeper insights into individual and organizational behaviour, supporting a stronger customer-centred culture and enhancing accountability across the team. Woodhead's (2011) case study of an NHS team highlighted how the team coaching process improved team relationships by helping team members "see the human person behind the professional mask" (p. 102). Godfrey *et al.*'s (2014) case study also reported improvements resulting from the coaching process, although what was less clear was whether the coaches were trained and whether the coaching was delivered 1–1 or to teams of health care professionals. The research gathered both qualitative and quantitative (survey) data and noted that teams, who experienced the coaching felt it positively impacted relationships and technical work. Many of these studies are compromised as a result of the researchers acting as the facilitators, evaluators and authors. Furthermore, in these and other studies, the methods used were often 1–1 coaching, with ill-defined metrics and a lack of quantifiable measures.

In our systematic literature search using the terms "Randomized Control Trial" and "Team coaching" using Google Scholar, PubMed, APA PsycNet and EBSCO, we were unable to identify any RCTs or experimental design studies of workplace team coaching. We subsequently checked with key authors in the field, who were unable to identify such papers, dissertations or unpublished studies. We extended this to colleagues in China, Germany and Spain, who consulted the literature in these languages and were also unable to identify any team coaching RCT or experimental design studies.

In summary, as with examples from early coaching practice (see Sauer, 1999; Winum, 2005), the focus of published work in team coaching has to date been on the personal experience examined through qualitative methodologies and case studies. Whilst these provide a useful starting point for further exploration of a phenomenon, the effectiveness of an intervention requires more robust research designs. Given the sparsity of the literature, the objective for this study was to examine the effectiveness of team coaching as an organization intervention and its impact on individual team members.

LEGO® Serious Play® (LSP). LSP is a facilitator methodology that uses LEGO® bricks as a tool for problem-solving, communication and team building in a business organizational context (LEGO®, 2019). It was developed in the late 1990s by Johan Roos and Bart Victor in collaboration with LEGO® (Roos and Victor, 1999) in response to failing market share.

The solution is designed to create conducive conditions for problem recognition, knowledge creation and shared understanding (Dann, 2018) when delivered by a licensed LSP practitioner. The method encourages participants to think with their hands, using LEGO® bricks to build physical models representing their ideas, insights or solutions. More recently, writers have argued its application in the workplace can be constructed as a positive psychological intervention when used with facilitative methods such as coaching, helping individuals articulate their thinking (Quinn *et al.*, 2021; Wheeler *et al.*, 2020).

Roos and Victor (1999) suggest that the LSP concept is informed by three main principles: (1) constructive learning, (2) metaphorical thinking and (3) playful exploration. Firstly, participants engage in hands-on building activities to stimulate creative thinking and problem-solving. Secondly, the creation of 3-D models to express ideas and thoughts, which in turn participants frequently articulate in the form of stories or metaphors. Thirdly, the playful nature of LEGO® and, for many people, the reconnection with their own childhood, encourages participants to experiment, take risks and explore new ideas without any fear of judgement, which they might experience in a more formal setting.

Significant benefits have been claimed by writers, including providing greater opportunity for creativity (Roos *et al.*, 1999), enabling diverse voices to be heard (McCusker, 2020), using play to foster relationships between participants (Mainemelis and Altman, 2010) and developing confidence and creativity (Dijks *et al.*, 2018).

LSP has been used in team and 1–1 coaching, with evidence suggesting that coaches find the use of a physical process helpful in enabling new awareness and insights within a psychologically safe environment, where ideas emerge in a way that allows more time for thinking, full engagement (flow) and the facilitation of connections between different aspects of participant roles and relationships (Quinn *et al.*, 2021; Wheeler *et al.*, 2020).

Measuring team performance. There has been much discussion about high team performance (Hackman, 2002; Widdowson and Barbour, 2020). Two factors are widely recognized as being of critical importance: a willingness for team members to speak openly and take risks. Secondly, a perception amongst individuals that they are members of a “team”, which shares a goal and a similar fate (Hackman, 2002): what might be described as an “all for one, and one for all” mentality. These two aspects may be measured through two concepts: psychological safety and group cohesion.

(1) Psychological safety

Psychological safety refers to the shared belief within a team that it is safe for its members to take interpersonal risks, express themselves openly and share ideas without fear, negative consequences or hostile criticism. The concept was originally developed by Edmondson (1999). Psychological safety has been defined as: “*The belief that one will not be punished, or humiliated, for speaking up with ideas, questions, concerns, or mistakes, and that the team is safe for interpersonal risk-taking*” (Edmondson, 1999, p. 1). Subsequent research has further developed the concept as a key ingredient of team learning, development and performance (Edmondson, 2002).

A longitudinal study by Bergmann and Schaeppi (2016) identified psychological safety as the most important element for effective teams. They argued that organizations which celebrate both success and failure create psychologically safe places which lead to greater long-term creativity and risk-taking. We were, therefore, interested in the measurable impact of an LSP team coaching intervention upon a team’s level of psychological safety.

(2) Team cohesion

Team cohesion is a psychological construct that refers to the degree to which members of a team feel connected, united and committed to each other. It encompasses the interpersonal

relationships, shared values, communication and sense of belonging within the team. Team cohesion is argued to be essential for effective teamwork as it is evidenced to foster a positive team climate, enhance motivation and improve overall team performance (Carless and De Paola, 2000; Carron and Brawley, 2000).

Carron and Brawley (2000) identified two main components of cohesion: firstly, social cohesion, which refers to the interpersonal relationships amongst team members. Social cohesion involves the development of trust, friendship and emotional management, with high social cohesion generally leading to more enjoyable and satisfying team experiences. Secondly, task cohesion, which refers to the shared commitment of team members towards achieving common goals and objectives. Task cohesion is crucial for the effective functioning of the team, as it ensures that the members work collectively, share resources and support each other in their efforts to achieve targets.

Multiple studies have shown the positive effects of cohesion on team performance, with more cohesive teams out performing less cohesive teams (McGrath, 1984) and that team cohesion has a positive effect on an individual's contribution to a team (Carron *et al.*, 2002). However, studies have noted other factors also contribute to team cohesion including the degree of interaction, team size and nature of the task (Wright and Drewery, 2006). As a result, team studies need to establish specific inclusion criteria to control for these factors.

Salas *et al.*'s (2015) review of cohesion literature identified 210 papers relating to teams. The review indicated that cohesion is not only a central feature of team performance but also a temporal one, subject to change over time, with team leaders playing a critical role in its development. In a more recent meta-analysis of the literature, Grossman *et al.* (2021) noted the importance of team cohesion as an antecedent of team performance. However, this was nuanced by factors such as team pride and similarity of purpose across the team as well as the changing nature of teams, such as the emergence of hybrid working patterns, agile and project teams and remote working or geographically dispersed teams.

Therefore, the present study sought to measure the impact of team coaching on individual team members using LSP within real world organizational teams. To minimize the impact of these nuancing factors, such as remote working, project and complex teams and complex and multiple goals, we established a tightly bounded definition of a team to reduce these potential contaminating factors.

The research question was: "Does team coaching using LSP have a positive effect on team member psychological safety and/or cohesion"? We proposed two hypotheses for review based on the data collection from the two questionnaires:

- H1. There will be a greater increase in psychological safety amongst individual team members for the team coaching with the LSP condition than the non-LSP condition.
- H2. There will be a greater increase in cohesion amongst individual team members for the team coaching with the LSP condition than the non-LSP condition.

Method

Design

The study used a double-blind randomized control trial, with parallel comparable interventions and a mixed design. There were two dependent variables: scores on a measure of psychological safety and scores on a measure of group cohesion. There was one related independent variable, timepoint and one unrelated variable, "team coaching using LSP" or "traditional team development". Both facilitators and participants were unaware of the details of the study. Facilitators and the participants were advised that they were engaging in "team development research". Neither team was advised of the parallel

intervention or of the measures being used. Ethical approval was obtained from a university ethics committee prior to the start of the study.

Participants

Six genuine organizational teams were selected to participate in this study as meeting the criteria identified for the study. The teams were recruited through an open advertisement by a professional body to its members. The advert made no mention of methods, beyond being a free one-day “team development day” for existing teams, which was also part of a research study. Given the potential for contaminating factors, such as those identified by Wright and Drewery (2006), tightly defined criteria for participant teams were established. The teams needed to meet the following inclusion criteria: (1) they were an existing team where the majority of members had worked together for a year or more, (2) the team consisted of between 8 and 13 members, (3) team members were employees (not contractors or external associates), (4) they worked in a single physical geographical location, (4) the team all shared an operational task or goal – for example, they were a finance team or marketing team within an organization – and (5) all of the members were aware of the research and willing to participate in the development day.

These criteria were selected to ensure the greatest consistency between the teams and ensure that the individuals saw themselves as members of a team, knew each other well, shared a long-term commitment to the team, each other and the team goal and were of a size that meant relationships in the team was complex, whilst the event was manageable in terms of the number of participants at a single event.

The six teams, consisting of a total of 51 individual participants, were randomly assigned to a condition: either a “team coaching with LSP” day or “team facilitation workshop” day. Participant characteristics are summarised in Table 1.

All participants attending the day were aged over 18 years and were briefed as to the activity on the workshop, the associated research that the anticipated outcome would be published and that no data would be included which would allow individuals or organizations to be identified. Informed consent was secured prior to the start of the workshop.

Four facilitator-coaches were used across the six team sessions to minimize any distorting effect attributable to any single facilitator. All facilitators were trained specialists in team coaching using LSP or team away day facilitation.

Procedure

Teams were allocated to one of two conditions using a simple random allocation method (Lim and In, 2019). Condition A team sessions were to be facilitated by an experienced LSP-licensed coach. Condition B teams were facilitated by an experienced team development specialist. All participants were advised that the study was to look at team performance. The facilitators were not briefed on the details of the instruments being used or the research hypotheses, nor were they aware of the details of other interventions. Facilitators did not meet the teams until

Table 1.
Participant
characteristics

Gender (n)	Racial identity (n)
Female (37)	Person of colour (9)
Male (14)	White (41)
Non binary (0)	
Source(s): Authors' own work	

the event and were asked to focus the event on improving team effectiveness. On arrival (T1), participants were invited to sign a consent form and to complete the GEQ and PSQ.

In Condition A, LSP starter kits were placed out on tables prior to the arrival of the team. In addition, LSP resources were available for participants to use throughout the day on their builds. The teams worked on several exercises, which were unique to the participants in the team reflecting a coaching-based approach, such as “build a model which illustrates yourself” or “build a model of the team and its interactions with your wider organization”. During each exercise (“build”), the team was invited to consider and respond to open questions to describe their model and share stories or insights from the joint builds with their colleagues. The facilitator used a coaching style based on behavioural and solution-focused approaches, encouraging self-discovery and sense-making. Each event varied whilst following the broad principles of LSP.

In Condition B, pen and paper were placed on tables prior to the arrival of the team. The team had access to pens, flipcharts and other resources throughout the day. The facilitators invited participants to work on exercises such as: “What are the team’s objectives?” and “What are the team’s priorities for the coming six months?” The teams were invited to discuss topics posed by the facilitator and use flip charts and magazines to write, draw and collage their outputs throughout the day.

The researchers observed both conditions to ensure similarities in the length of time and consistency with the methodologies: coaching and facilitated team building. At the end of both days (team coaching with LSP and team facilitation), the participants were invited to take away the materials they had used – LEGO® builds and flip chart outputs.

At the close of the day (T2), participants were invited to complete the GEQ and PSQ for a second time. Each team was followed up eight weeks after the development day (T3), through a personal visit by the researcher to the team office, where they were invited to complete the two questionnaires for the third time. All participants were the same for T1, T2 and T3 and all participants completed the questionnaires at all three time points.

Measures

(1) Group Environment Questionnaire (GEQ)

GEQ is an 18-item, nine-point Likert-type scale, with 1 = Strongly disagree and 9 = Strongly agree, developed by Carron *et al.* (1985). It comprises four subscales (individual attractions to the group-task (ATG-T), individual attractions to the group-social (ATG-S), group integration-task (GI-T) and group integration-social (GI-S). Several of the items were reverse-weighted to minimize the effects of acquiescence response sets. An example item is “Some of my best friends are on this team”. Carron *et al.* (1998) report Cronbach’s alpha values for the four subscales of 0.65–.76. The cohesion score was calculated as the sum of all items, with a high score indicating a high level of cohesion.

(2) Psychological Safety Questionnaire (PSQ)

The PSQ is a seven-item, seven-point Likert-type scale, with 1 = Strongly disagree and 7 = Strongly agree. Three items are reverse-weighted, for example, “It is completely safe to take a risk on this team”. The PSQ has demonstrated high internal consistency, with Cronbach’s alpha values between 0.75 and 0.83 across various studies (Edmundson, 1999). Psychological safety was determined by calculating the sum of all items, with higher scores indicating high perceived levels of psychological safety.

Table 2.
Means and standard
deviations for the
dependent variables

Results
The data were cleaned and screened in advance of analysis, which included reverse-coding of negatively weighted items. One observation (case 49) was identified as an outlier and removed from the dataset prior to the following analyses being conducted. Mean and standard deviations for the measures of psychological safety and team cohesion across the three data collection points for the two conditions are presented in [Table 2](#).

Cronbach's alpha
Cronbach's alpha values were obtained for each variable at each time point. These are summarised in [Table 3](#).
Two-way repeated measures ANOVA was conducted separately on psychological safety and team cohesion, comparing the results from participants in Condition A (LSP) and Condition B (Control). For the dependent variable psychological safety, there was no significant interaction between time and condition, Wilks Lambda = 0.91, $F_{(2, 48)} = 2.41$, $p = 0.10$, $\eta = 0.09$. There was a significant main effect for time, Wilks Lambda = 0.61, $F_{(2, 48)} = 15.21$, $p < 0.001$, $\eta = 0.39$, with the LSP condition showing an increase in psychological safety scores at T2 and T3, compared with T1, but the control condition only showing an increased score at T2 compared with T1 (see [Table 3](#)). The main effect comparing the two types of intervention was not significant, $F_{(1, 49)} = 3.94$, $p = 0.053$, $\eta = 0.074$, suggesting no difference in the effectiveness of the two conditions. Therefore, the null hypothesis for [H1](#) cannot be rejected.
For the dependent variable team cohesion, there was a significant interaction between time and condition, Wilks Lambda = 0.67, $F_{(2, 47)} = 11.35$, $p < 0.001$, $\eta = 0.33$. There was a substantial main effect for time, Wilks Lambda = 0.65, $F_{(2, 47)} = 12.60$, $p < 0.001$, $\eta = 0.35$, with the team coaching with LSP condition showing an increase in team cohesion scores at T2 and T3, compared with T1, but the control condition only showing an increased score at T2 compared with T1 (see [Table 3](#)). The main effect comparing the two types of intervention was

Condition	N	DV	T1		T2		T3	
			M	SD	M	SD	M	SD
Team coaching with LSP	23	PSQ	3.78	0.53	4.20	0.26	3.89	0.32
		GEQ	5.48	0.75	6.51	0.63	6.02	0.74
Control	28	PSQ	3.66	0.69	3.80	0.59	3.58	0.74
		GEQ	5.33	1.13	5.38	0.83	5.12	0.97
Total	51	PSQ	3.72	0.62	3.98	0.51	3.72	0.60
		GEQ	5.40	0.97	5.90	0.93	5.53	0.97

Source(s): Authors' own work

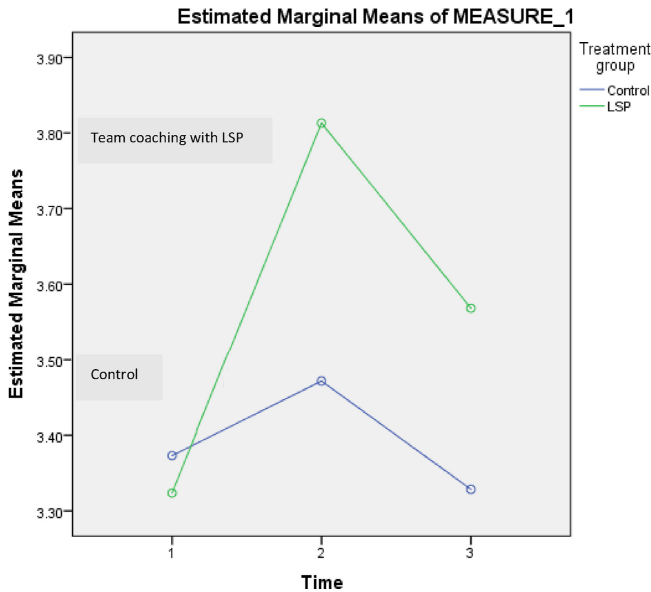
Table 3.
Cronbach's alpha
values

Scale	Cronbach's alpha	Cronbach's alpha based on standardised items	No of items
TC TP1	0.843	0.847	27
TC TP2	0.850	0.859	27
TC TP3	0.827	0.838	27
GE TP1	0.764	0.782	18
GE TP2	0.831	0.833	18
GE TP3	0.838	0.840	18

Source(s): Authors' own work

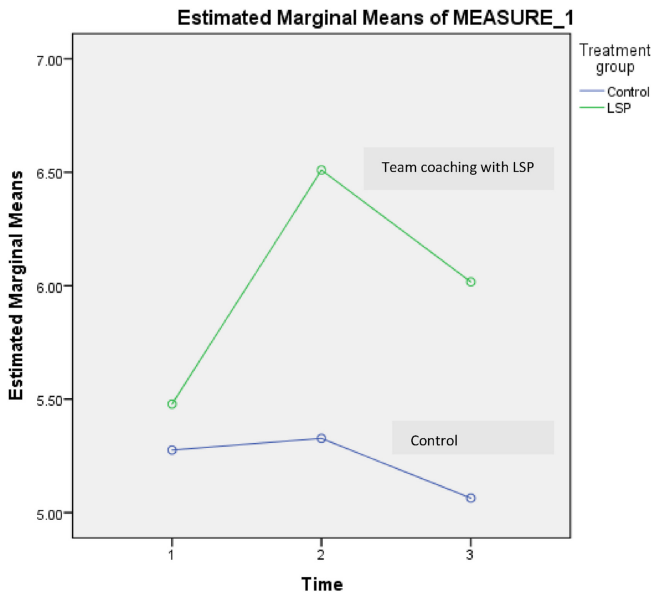
significant, $F_{(1, 48)} = 11.61, p = 0.001, \eta = 0.195$. These results support H2 and suggest a difference in the effectiveness of the two conditions. LSP and team coaching

We have summarized the results in Figures 1 and 2, which show the change from T1 to T2 from both interventions, with team coaching having significantly greater gain and for T3



Source(s): Authors' own work

Figure 1.
Psychological safety



Source(s): Authors' own work

Figure 2.
Team cohesion

where the impact of both declined, but team coaching with LSP continued to show a statistically significant difference to T1.

Discussion

This study examined the effect of team coaching using LSP on team cohesion and psychological safety. Using a sample of extant workplace teams, the data indicate that psychological safety and team cohesion were enhanced during the team coaching with LSP workshops and the facilitated team building workshops, as shown by the changes between T1 and T2 on both scales.

For both psychological safety and team cohesion, the teams in the team coaching with LSP condition saw a larger improvement in scores at T2 than the participants in the non-LSP condition. A second measure of psychological safety and of team cohesion was taken at T3. The data indicate that, whilst participants from either condition saw a reduction in both scores compared with T2, the LSP condition T3 scores remained higher than those at T1, suggesting a sustained change which might be attributed to the team coaching with LSP intervention. Moreover, whilst there was no statistically significant difference in the scores for psychological safety across the two conditions, the team coaching with the LSP condition did result in significantly higher team cohesion scores than the control condition, offering support for H2.

These results may be explained in a number of ways. Firstly, as we explored in a previous qualitative study (Wheeler *et al.*, 2020), participants in the team coaching with LSP group highlighted several distinguishing features, which marked out their experience compared with past team building events. Firstly, the LEGO® building process released thoughts and feelings previously ignored and acted as a buffer between those thoughts and the reality of discussing them with other team members. Participants suggested it provided the opportunity to go beyond their day-to-day surface thoughts, allowing the coaching conversation to more deeply explore the meaning of events and relationships than a traditional team building event which typically focuses on team content and team activities. Secondly, participants suggested that the visual representation supported using the team coaching process allowed cognitive associations to arise and for the objects to act as an intermediary between a complex idea or feeling and their articulation of this to the group. Thirdly, the coaching process allowed time to think, whilst simultaneously an experience of being in flow as the LEGO® builds took place. Fourthly, LEGO® has been associated with flow states (Csikszentmihalyi, 1975) and this too may have been a contributing factor to the positive outcomes, as participants found both enjoyment and engagement from the process, making the experience more memorable.

Writers on team coaching with LSP have highlighted the creative process, space for reflection and flow state as important aspects which have emerged from the past case studies and facilitator-team coach observations of this process, supporting the data we identify in the qualitative part of our previous study (Wheeler *et al.*, 2020) and in other team coaching with LSP research (Quinn *et al.*, 2021).

Our analysis suggests that there are only 21 workplace RCT workplace coaching studies. We note that only one of these used a comparable intervention with blind allocation of participants (Passmore and Rehman, 2012) and only five studies feature a T3 measure, determining the post-intervention impact after a lapsed period of eight or more weeks (Finn *et al.*, 2007; Grant *et al.*, 2009; Green *et al.*, 2006; McGonagle *et al.*, 2020; Williams and Lowman, 2018). The difference may be explained by the varying definitions used for “coaching”, with the lower figure focusing on coaching interventions using a collaborative, future focused, non-directive style, in accordance with our coaching

definition and the larger number of studies including more directive instructional approaches to coaching.

In this regard, this study is unusual. Further, none of these studies used double blind (blinded participants and blinded facilitators, who were unaware of the parallel interventions) and none related to real workplace teams. We believe this is the first RCT study of team coaching as well as the first RCT study using LSP. Finally, it becomes one of a small number of RCT cohort studies which contain pre-, post- and longitudinal data for a team intervention.

Limitations of this research

This study has a number of limitations. Firstly, the sample size was limited, with only six teams used for the study and a comparative small number of individual participants. A larger sample with 20+ teams would have been preferred, with 100+ participants in each condition. Secondly, the small pool of facilitators (four in total) working with the teams may yet have been a factor contributing towards any outcome variance. Thirdly, the teams were relatively homogeneous and were all drawn from one country (UK). More diverse teams, in terms of geographical location or the demographic characteristics of the team members, may lead to different results. Finally, given that the team coaching session used LSP, it is hard to disaggregate the effects of LSP from those of team coaching and whether similar outcomes would have been achieved with a team coaching approach without LSP or indeed whether other forms of team interventions would deliver greater improvements.

Practical implications

The study does highlight the value of team coaching, specifically the opportunity provided within a team context to reflect and engage with colleagues through a less directive process than is common in many team development days. Secondly, the study highlights the value of using LSP; specifically, physical objects being used to represent complex ideas and thus enable deeper, more insightful conversations to occur. Finally, the creation of physical objects (the output from the LEGO® builds) in a collaborative process appears to be a significant factor in the sustained impact of the session when compared with a team development session, where the benefit returned to pre-event levels over the subsequent eight-week period.

Conclusion

We believe this is the first RCT of both team coaching and LSP. The results suggest that team coaching combined with LSP can contribute to the development of psychological safety and group cohesion amongst individuals; two critical components of groups seeking to achieve collaborative tasks. Secondly, the study provides evidence that team coaching with LSP is a more effective intervention for building cohesion than a traditional facilitated team development. Thirdly, team coaching with LSP can deliver a lasting impact on team members.

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