Taught resilience programmes: a case study from the perspective of employees of a large pharmaceutical company based in the UK

Frances Costello

Psychology, University of Liverpool, Liverpool, UK

Abstract

Purpose – Research was undertaken to understand whether taught resilience programmes which highlight the protective factors of resilience would impact individual resilience outcomes. The research focussed on specific resilience dimensions, change agility, physical, emotional and mental resilience, purpose in life and recovery; in an attempt to bridge the gap in understanding whether it is possible through taught programmes to improve resilience through the creation of new habits.

Design/methodology/approach – The research was conducted using interpretative phenomenological analysis methods and used semi-structured interviews with 12 participants to understand participants lived experience of a one-day personal resilience programme, conducted within a private global manufacturing organisation.

Findings – The research found that all 12 participants interviewed 12–18 months post-programme made sustainable habits changes increasing personal resilience levels. Participants built new habits into their everyday lives, in the physical dimension exercising more regularly, taking breaks, changes in nutrition and creating better sleep patterns. Through increased understanding of emotional intelligence participants were able to react more favourably to adverse situations and through mental increased resilience focus achieve work and home priorities. In understanding the change journey participants found that they were able to move more quickly through the change cycle. Almost all participants found understanding their life purpose difficult and were not able to give a conclusive answer to what this might be, they found that attending the programme helped reflection in this dimension.

Originality/value – The paper includes an overview of previous resilience research but differs in its examination of the impact of a specific taught resilience programme in a large private sector organisation using IPA methodology.

Keywords Resilience, Protective factors, Habit change, Transfer of training, Taught programmes, Organisational psychology

Paper type Case study

1. Introduction and background to the study

The Health and Safety Executive (HSE) (2018), reported 15.4 million lost working days in the period 2017/2018 due to stress, depression or anxiety, numbers of lost working days were significantly higher in education, human health, social work, public administration and defence workplaces compared to other industries. The HSE found that workload pressures, hard deadlines, organisational change, high work pressure, lack of certainty and lack of leader support were the highest contributor to lost working days.

Historically resilience programmes have focussed on the reduction of adverse mental health outcomes, however, more recently resilience focus has shifted to the creation of high

capability organisations and the competitive advantage this affords. High levels of resilience allow organisations and the individuals within to respond effectively to disturbance and threats, increasing resilience capability through learning gained during these adverse events. As business demands escalate at a rapid pace, increasing resilience protective factors allows individuals to perform at their highest-level during periods of business as usual. Placing emphasis on protective factors gives employees the tools to deal with competing demands and enables increased profitability and competitiveness for the organisation.

Researchers in the field of resilience focussing on the characteristics of organisations that thrive and survive have demonstrated increased energy and resilience through attendance on work-based programmes. Previous studies have focussed on the public sector and have been based on one or two dimensions of resilience rather than resilience as a whole (Burton *et al.*, 2010). Consequently, this study seeks to understand the effect of taught resilience programmes on personal resilience levels within a large pharmaceutical company based in the UK. Additionally, the study explores and considers the impact of a specific resilience programme incorporating six protective factors: agility, physical, emotional, mental, life purpose and recovery, its impact on participants and associated or subsequent changes in resilience levels. As few resilience studies use interpretative phenomenological analysis (IPA) methodology the research was conducted using IPA in an attempt to understand the lived experience of the participants and resilience outcomes of attendance on a resilience programme. The research provides an understanding of why participants transferred learning to habit change and achievement of higher resilience outcomes. As employee resilience is argued to be a key capability within high performing teams and superior capability organisations, it is important to understand more about the creation of individual protective factors through taught programmes to create both competitive advantage, individual and organisational resilience.

2. Literature review
2.1 Definition
There is no single operationalized definition of resilience (Lui *et al.*, 2014), the concept of resilience has evolved over the past 40 years with agreement that it encompasses an adaption to risk, stress and adversity. Building on this definition, resilience is recognised as a dynamic process between risk factors and protective factors and the psychological capacity to bounce back from adversity and maintain normal functioning in adverse conditions (Jackson *et al.*, 2007). Resilience from this perspective is almost seen as a brief period of disequilibrium and mind state which offers insight and learning from an adverse experience (Connor and Davidson, 2003). Adaption and resilience levels are influenced by culture, biology, psychology and organisation, although an individual may respond well to stress in one situation or in a certain period, they may not always experience this adaptive capacity (Southwick *et al.*, 2014). Current research has moved towards understanding protective factors which enhance individual strength, that is, the cognitive and emotional resources gained through education and wisdom to mitigate trauma (Braun *et al.*, 2017). It is the investigation into the enhancement of these protective factors through taught resilience programmes that informs this body of research.

2.2 Resilience dimensions
2.2.1 Agility. In developing greater workforce agility or adaptive capacity (McCann et al., 2009; Braun *et al.*, 2017), organisations that are able to manage both moderate and rapid change, experience competitive advantage. Modern organisations require a flexible employee base that can adapt quickly to customer need and organisational change, resilience having a higher importance when experiencing circumstances of high agility and change. (Reivich *et al.*, 2011). Building organisational agility allows better management of the impact of change and the uncertainty that this brings (McCann *et al.*, 2009). In understanding change readiness, sharing

knowledge and understanding what is preventing individual agility and creating different thinking in relation to resilience levels, organisations can deal with change in a positive way. In building agility capability through collaboration, co-operation and work relationships, workforces are more likely to initiate, seek out opportunity and normalize change with ease and comfort. (Citrin, 2017).

2.2.2 Physical. The enhancement of physical resilience falls into three categories : sleep, nutrition and exercise, chronic sleep deprivation creating increased blood pressure, cortisol, insulin and proinflammatory cytokines (Irwin *et al.*, 2016), leading to depressive symptoms affecting mood and well-being (Vandekerckhove and Cludyts, 2010). A direct correlation has been found between improved sleep and physical and emotional wellbeing, achieving rapid eye movement sleep increasing the ability to recover from stress and trauma (Goldstein and Walker, 2014). The loss of just one night's sleep resulting in compromised emotional regulation (Yoo *et al.*, 2007).

Nutrition affects both physical and cognitive performance, small differences in habitual dietary intakes are positively correlated with increased resilience (Lutz *et al.*, 2016). Diets rich in saturated fats, refined sugars, animal products, low vegetable and fruit consumption have a negative impact on cortisol levels, micronutrient interventions include greens, beans, fruit, protein foods, seafood and plant proteins, fatty acids, and refined grains are found to reduce stress and anxiety in positively affecting cortisol levels (Pistollato *et al.*, 2016). Healthy diet patterns and antioxidant rich foods have been found to have a protective influence against depressive symptoms, with a Western diet a predictor of depression and anxiety (Rienks *et al.*, 2013).

Active people have greater resilience than those who lead a sedentary life, have less stress and improved mental health as a result of being more physically active (Childs and De Wit, 2014). Physical exercise is a protective factor with an effect on overall resilience, exercising just once a week showed decreased emotional stress, confirming a direct relationship between exercise and enhanced resilience (Avilia *et al.*, 2018). In addition, exercise has a neurotrophic factor protecting the neurons in the striatum and hippocampus during periods of stress (Holmes, 2014), this combined with inactivation of the pre-frontal cortex reduces cortisol response to emotional situations (Zschucke *et al.*, 2015).

2.2.3 Emotional. Emotional intelligence (EQ) is the ability to perceive, access and generate emotion, have clarity in thinking and regulate and reflect upon emotions allowing motivational and intellectual growth (Mayer *et al.*, 2004). Emotional intelligence is highly correlated with individual advancement within organisations and individuals with highly developed emotional intelligence are found to have higher resilience and motivation levels when under pressure (Magnano *et al.*, 2016). In labelling rather than responding to emotions, stress levels can be alleviated and individuals able to spend less time in recovering from stressful events than those who fail to use the protective resource found in increasing EQ levels. Low EQ has been found to create high worry states, avoidance coping strategies causing greater levels of psychological stress (Jung *et al.*, 2016). Unlike intelligence quotient (IQ), EQ is argued to be dispositional, so can be increased through learning approaches that highlight the awareness of individual feeling, and management of emotional expression (Armstrong *et al.*, 2011).

Critiques of the EQ concept argue that EQ has no link to IQ, arguing that reading emotions has no bearing on IQ but rests on the ability to develop introspection as a skill, and the ability to form new habits and make different choices (Locke, 2005). Whilst it is acknowledged that there is a neurophysiological aspect to EQ, critics suggest that the brain is unable to influence the content of knowledge or values, therefore incapable of reasoning, which they argue is a volitional process (Waterhouse, 2006).

2.2.4 Mental.

2.2.4.1 Multitasking. Multitasking has been found to have a direct negative influence on the retention of information and working memory (WM) and this has been found to be greater in older adults, integration recovery failure manifesting in the inability to dynamically switch

between functional brain networks. WM performance is negatively impacted by the presence of external stimuli that are outside the focus of our memory goals (Clapp *et al.*, 2010). Older adults experience greater impairment and distraction within higher demanding workplaces of high-interference. Older individuals are found to place more attention on irrelevant visual stimuli which directly links with demised WM and task re-engagement explained by functional brain connectivity between the hippocampus and prefrontal cortex differentials between older and younger adults (Grady *et al.*, 2009). Whilst most research points to the negative impact of multitasking on cognitive function, which is vital to process, store and manipulate information within the mind; some advantage has been found from the use of dual media, for example watching TV whilst using mobile phone applications, this dual use has been found to moderate the effect of media on its audience, disrupting the information concentration, suppressing content and information acceptance (Jeong and Hwang, 2016). Multitaskers are unable to critically process information and generate counterarguments, which raises the question whether multitasking is indeed a negative influence? (Wang and Tchernev, 2012). Multimedia multitasking offers emotional gratification especially when completing routine, or neutral tasks and increases engagement positively increasing cognitive processing levels (Chinchanachokchai *et al.*, 2015).

2.2.4.2 Inner voice. Our inner voice, inner speech or verbal thoughts are essential to thinking, self-awareness, self-regulation, problem-solving, motivation, calculation, memory and cognitive tasks occupying a quarter of humans waking life (Perrone-Bertolotti *et al.*, 2014). However, this internal commentary or dysfunction of inner speech is identified as a risk factor for depression, anxiety and mental resilience levels. Inner speech is required for task-based activities occurring both during the "sloppy thinking mode" and during sustained periods of attention. Individual differences in working memory capacity are related to the ability to intentionally suppress intrusive thoughts (Geraerts *et al.*, 2007). A direct link has been found between increased executive functioning and self-regulation of thoughts, negative inner speech impairing performance and controlled inner speech improving performance (Munkata *et al.*, 2011).

2.2.5 Spiritual. Traditionally definitions of meaning in life incorporated both comprehension and purpose, more recently this has also included human value and significance in life (Heintzelman and King, 2014). Meaning in life incorporates cognitive function and understanding, motivation (purpose) and affective meaning (a sense that each individual life has meaning). It is argued that meaning in life and purpose in life are different (George and Park, 2013), purpose in life relating to a long-term vision, goal or aspiration which motivates daily behaviour giving individuals the capacity for challenge (Bartres-Faz *et al.*, 2018). An association can be found between individuals understanding their purpose in life and reduction of age-related conditions such as stroke, disability and cardiovascular events. Purpose in life is also regarded as a protective factor against biological risks such as inflammatory markers, cognitive ageing and dementia (Cohen *et al.*, 2016). Higher purpose in life scores correlate positively with increased executive function, memory and cognitive performance across the full adult population acting as a protective factor against stress (Windsor and Curtis, 2015).

2.2.6 Recovery. Recovery in all dimensions, agility, physical, emotional, mental, spiritual and recovery are dependent on the creation of new individual habits. Habits are defined as actions that are triggered in response to contextual cues associated with performance (Wood *et al.*, 2012). It is the repetition of consistent simple actions which leads to contextual cues (habits). Once the initiation of action is transferred to an external cue all dependence on conscious attention or motivational processes is reduced. Habits are more likely to persist after conscious motivation or interest dissipates as automation of common actions becomes the norm mental resources are freed for other tasks.

Research has shown that the missing one opportunity to form a new habit has no serious consequences for habit formation, however with repetition in the learning phase, behaviour is shown to strengthen the contact–behaviour association (Gardner *et al.*, 2012). Previously it

was assumed that tangible rewards for new behaviours underpinned habit changes, however recently research has pointed to effective habit change only when reward is not the goal of the behaviour (Karpinen *et al.*, 2018).

2.2.7 Taught programmes. Questions have been raised about the efficacy of taught resilience programmes and whether resilience levels improve over time through attendance on programmes or whether increases are simply the result of the Hawthorne effect (the attention and training received during programmes) (Waite and Richardson, 2004). Research shows that work-based interventions supporting resilience deliver benefits for both employees and their organisations (Robertson *et al.*, 2015). Training in the effective negotiation of workplace stressors leads to healthier and more engaged workforces, increased positive mental health, positive physical and biological health outcomes, higher psychosocial functioning and improvement in job performance (McCraty and Atkinson, 2012). Since the period of global recession and austerity there has been increased interest in workplace resilience as a protective factor for organisations. Heavier workloads and higher levels of pressure have imploded into family life, creating a higher priority for personal resilience programmes within organisations. Resilience programmes have been shown to have a positive impact on mental health, wellbeing outcomes, performance benefits and behavioural performance moving individuals into a different physiological or psychosocial state (Millear *et al.*, 2008).

Much resilience research has been conducted within public sector settings, leaving a gap in research of large corporate organisations; no comparative research was found within the pharmaceutical industry (Rogerson *et al.*, 2016; Chesak *et al.*, 2015). Resilience programmes have been found to have a positive effect in all the above settings except for the United States Army whilst under deployment (Reivich *et al.*, 2011). Researchers reported increased subjective well-being, increased positive mental health, self-efficacy, psychosocial ability and small increases in work satisfaction and social skills (Sherlock-Story *et al.*, 2013). In addition, resilience programmes resulted in decreased fatigue and antithrombin anticoagulant in thrombosis prevention (Arnetz *et al.*, 2009), increased performance and goal attainment and higher levels of productivity (Pipe *et al.*, 2012). Whilst most resilience programmes are typically made up of a common base of research and theory, training delivery modes vary in content and format, it is difficult to draw concrete conclusions about the most effective design and delivery of resilience training (Robertson *et al.*, 2015). What is known is that personal resilience has statistical significance across health and performance criteria at the individual level and the potential to create significant returns at the organisational level, enhancing one or more protective factors, strengthening the cumulative protection of risk (O'Dougherty *et al.*, 2013; Vanhove *et al.*, 2016).

2.2.8 Transfer of training. What impacts the transfer of training, is one of the frequently pondered questions by industrial and organisational psychologists (Bell and Moore, 2018). Recently this has progressed to understanding cognitive and behavioural changes, increase in productivity, job performance and the competitive advantage training transfer can bring to organisations (Cromwell and Kolb, 2004). Transfer of training focusses on the extent to which learning converts into increased work performance and maintenance of new knowledge and skills; it is estimated that only 10% of learning results in transfer (Grossman and Salas, 2011). It is posited that three elements influence learning transfer: trainee characteristics, behaviour modelling and work environment. Individuals with higher cognitive ability are potentially more equipped to process and retain information (Veluda *et al.*, 2007), and those with higher efficacy are more confident in their ability to acquire new skills and practise within the work environment (Blume *et al.*, 2010). For training to transfer, trainees require opportunities to practise new skills, receive feedback and reinforcement following new practises from supervisors who have also completed the same training (Taylor *et al.*, 2005). It is widely believed that environmental factors within the workplace influence whether trainees exhibit learnt behaviours and the transfer climate is central to this. Support from peers and supervisors in encouraging and modelling new behaviours is the catalyst to the transfer of training (Gilpin-Jackson and Bushe, 2007). What is

clear is that transfer of training is less likely to occur with non-use or non-practise of new skills, and more likely where a specific behavioural goal is chosen by participants which addresses a specific need or want (Brown and Warren, 2009; Baldwin et al., 2009).

3. Research approach
3.1 Epistemological and philosophical stance
The philosophical approach taken within this qualitative study incorporated both interpretivism and social constructivism. Interpretivism allows meaning to be attached to the knowledge of the studied participants; social constructionism creating meaning contributing to the social world of its inhabitants, directing behaviours and control experience.

3.2 Qualitative research design
Qualitative research was considered the most appropriate to meet the objectives of the study, allowing the creation of rich data, pertinent to the research question. IPA was chosen as the qualitative method for this study as it lends itself to understanding the experience and meaning of a phenomenon or lived experience and how participants make sense of this allowing for reflection and dialogue and exploration of similar groups in comparable contexts (Smith, 2011; Flowers et al., 2001). IPA hears the voices of the participants and explores in detail the process through which they make sense of their own experiences, their understanding, perceptions and views of a given situation (Reid et al., 2008). IPA is widely used and established qualitative research method which has been used in many similar papers investigating the impact of personal resilience programmes (Arnetz et al., 2009; McCraty and Atkinson, 2012; Millear et al., 2008; Pipe et al., 2012; Waite and Richardson, 2004).

3.3 Sampling methods and participants
The research was conducted within a large United Kingdom (UK), based global pharmaceutical manufacturing organisation, participants were recruited from UK-based manufacturing sites, participants either self-selected to attend the resilience programme or were placed onto the programme as part of a wider learning curriculum, in addition participants attended programmes not facilitated by the researcher to eliminate bias.

For inclusion in the research, participants were required to be over the age of eighteen at the time of the interview. All participants were required to be employed on a UK site of the research organisation and have completed the one-day personal resilience programme within the past three years. Participants were excluded from the research if they declared a current adverse mental health status, including stress, anxiety and depression.

3.4 Procedure
Following ethical approval, past participants of the resilience programme from a held database were contacted by individual email by the Health and Wellbeing Consultant at the research organisation from 11 sites within the UK to take part in the research. Twenty one potential participants responded and were asked to complete the informed consent form, given an indication of the length of the interview and asked to email back to the researcher with times that they would be available for interview over the phone. Fourteen participants responded with a completed informed consent form and a convenient time for interview and were subsequently called at a specific time to conduct the interview (Table 1).

The initial email contained the research purpose, and what it would entail for the participants. Interested participants responded directly to the interviewer with an expression of interest, the researcher thereafter sent a response with a guide of the semi-structured interview questions intended to be used in the interview (consistent with IPA guidelines), an

Participant	Type of site	Area of UK	Ethnicity	Seniority	Gender	Included/excluded
1	Head office	South	White	Junior	Female	Included
2	Manufacturing	South	White	Junior	Female	Included
3	Manufacturing	South	White	Mid level	Male	Included
4	Manufacturing	South	White	Mid level	Male	Included
5	Head office	South	BME	Senior	Male	Included
6	Manufacturing	South	White	Junior	Male	Included
7	Home-based	South	White	Mid level	Male	Included
8	Head office	South	White	Senior	Female	Included
9	Manufacturing	South	White	Mid level	Male	Included
10	Manufacturing	South	BME	Mid level	Male	Included
11	Head office	South	BME	Mid level	Female	Included
12	Head office	South	BME	Junior	Female	Included
13	Manufacturing	North	White	Mid level	Male	Excluded

Table 1.
Demographics of
participants

informed consent form for completion and a copy of the Participation Information Sheet (PIS). All interviews were conducted by phone and recorded using computer audio equipment.

3.5 Data collection method
Interviews were conducted by asking a series of 10 open-ended questions developed to understand more about the lived experience of participants who had undertaken the personal resilience programme (Smith and Osbourn, 2003). The questions were designed around current literature and understanding of personal resilience, with the intention that the interviewee would be guided to move between analytic and evaluative thinking in their response and bring up other issues that they felt were relevant to their experience (Michie *et al.*, 2004). Whilst a framework of questions was used during the interview, other questions arose and individuals were probed further as part of the interview process, questions guided the participants experiential lifeworld response, however, matters arising were also followed up within the interview process. Semi-structured interviews were used to give interviewees an opportunity to think aloud and build on their response which is consistent with interpretivist epistemology. (Silverman, 2007).

3.6 Data analysis
Following data collection, interviews were transcribed verbatim into a word document which resulted in 44 pages of text. This was then transferred and numbered by line into an Excel document for analysis. The first interview was listened to, read and reread and notes added to the transcript. This was used to orientate the themes for use with subsequent interviews. Each interview was read and reread whilst simultaneously listening to the recording of the interview, the transcript was then reread several times, and explanatory comments based on association or connection that came to mind were noted in the right-hand side of each individual spreadsheet for each participant. Explanatory comments recorded what was interesting or significant about what the respondent had said and what was similar or different. Each interview was analysed for descriptive comments for example, objects or events, linguistics, use of pauses, pronouns, metaphors and conceptual content, questions and repetitions, explanatory notes were put in the right-hand side column. Initial notes were transferred into concise phrases, exploratory comments were analysed further, along with the data and emergent themes created (Smith *et al.*, 2009). Emergent themes from each interview were then analysed case by case, to identify the clusters of superordinate themes, this was achieved by grouping and regrouping the themes of each individual participant to understand and organise the connections between theme. A

superordinate theme table was completed for each participant linking key phrases from the data to the related number within the participant spreadsheet. On completion of the superordinate themes for each participant, master themes were created by comparing the superordinate themes, connections and sub-themes, these were identified across cases relating to the master themes. All emergent themes from participants were copied onto Post Its, grouped according to parallel or similar meaning, named and regrouped, duplicate themes removed, combined or developed. Themes were counted to see how many times they appeared in the narrative and whether they appeared in a third, half or all of participant interviews, in line with IPA guidelines, influencing the decision to include in the discussion and findings chapter (Smith *et al.*, 2012).

3.7 Ethical considerations

Ethical approval was sought and granted for research into the impact of taught personal resilience programmes, permission was granted from the research organisation for the use of IPA. For the purposes of the research paper, the research organisation was described as a large pharmaceutical organisation and all participants were anonymized in the final write up of the study. (Table 1)

4. Results

Data analysis of the interviews of the twelve participants resulted in seven superordinate themes, from these themes emerged sub-themes. In line with IPA methodology, only the largest recurrent themes, present in at least one-half of all participant interviews are explored in detail. Findings therefore focus on habit changes, busyness, leader-led change and finding purpose as the largest recurring themes. Mostly the themes that emerged were consistent with expected results from the questions posed, a surprising and large theme was that of how the busyness of the organisation impacted on participants and their reluctance to utilize the programme learnings (Table 2).

4.1 Theme 1: change

During analysis the theme change agility emerged, with sustainable change as a sub-theme. Almost half of the participants felt that understanding more about the change curve aided them in experiencing organisational and personal change. This gave them understanding of the emotions they and others could expect during times of change, which positively influenced change agility.

   4.1.1 Sub-theme: habit changes. Ten of the twelve participants reported a sustainable change in their resilience habits as a result of attending the personal resilience programme.

Themes	Sub-themes
Physical energy	Nutrition
	Movement
Change	Habit changes
	Change agility
Organisational culture	Victims of the organisational culture
	Busyness
	Validation
	Leader behaviour
	Leader led change
Programme content	Perception of programme
	Job plus coach
Emotional energy	Emotional response
Mental energy	Multitasking
Purpose	Finding purpose

Table 2.
Themes emerging from analysis

Participants described multidimensional habit changes, such as adding exercise to their daily routine to boost their physical energy levels, refraining from multitasking to allow for focus on particular tasks and taking time to reflect on their working and home lives. Removal from social media influence allowed them to be physically present with others including switching off from work-linked devices on leaving work premises to maintain a better work–life balance.

> Erm I'm not entirely sure, but it almost comes so naturally to me now, it really has had such an impact on me the course, I did not think it would, you know when you go on these courses, and think oh yeah, but dismiss it, I really made such an conscious effort in the first six months, then it just became habit, stupid things like going a lap around the building, walking up the stairs to get energy going again. Erm, I decided that I would no longer look at my phone at weekend, I actually have do not disturb on my phone after 6 o'clock on my phone, I do not get any emails coming through, I do not even look at it, it's just in my bag. You know, responding to emails is just encouraging other people to work at weekends, I do not think that's right (1.40).

> Really good actually, there is a lot of synergy between personal resilience and energy for performance, in the way they approach energy for performance so the two blurred within my head, but I found it really it really changed my habits, quite substantially after doing the course, although it was simple things like taking care of my physical energy, like eating breakfast everyday which was something that I never really took seriously before, I think the course and the plan to change my habits very practically was the most impressive thing for me, not being able to change my habits for ever but I'm going on this course for one day and being able to change my habits quite durably for almost two years since I've been on the course (5.50).

Respondents acknowledged their need to make sustainable changes to their working habits including the need to take breaks from their work and switching off from work at the end of the working day. Some participants reported trying new forms of exercise, changing their mindset about diet, dealing with emotion, developing coping mechanisms regarding the levels of work and becoming more health conscious overall. Participants found that that they were immediately able to change their habits after attending the resilience programme and found over time that they were not consciously thinking about their new habits as it became part of their daily routine.

4.2 Theme 2: organisational culture
Several sub-themes emerged within the overall theme of organisational culture, these included how individuals perceived themselves as victims of the organisational culture, the need for validation for effort and new resilient behaviours, the negative impact of leader behaviour and leader-led change. The largest sub-themes being busyness and leader-led change.

4.2.1 Sub theme: busyness. Over half of participants stated that the culture of the organisation required them to be busy, for example staying in all day meetings, not moving from a laboratory experiments to hydrate or take breaks on busy shifts were perceived to be expected behaviours. Participants almost expressed themselves as victims of the organisation and felt they had to grant themselves permission to deviate from the organisational culture feeling guilty for their actions.

> I'll be honest, I was working shifts that was extremely damaging on shifts, night shift, day shift for two years of my life, while I was on shift, when I was in production, I did not always have easy access to water. It was not always easy to take a break, it was busy, it was not easy to take a lunchbreak, it was hard. It was not conducive to having a sleep routine, in your life, early morning, late evening etc. I have been on days for the last year now and I have to say that's changed my outlook again quite significantly, I do not come home hungry, I've made changes in lifestyle. The course made me realise you need to be more balanced in what you are eating, I cannot operate properly if I do not eat properly or take breaks. It is really important that you drink enough water you know, when I was on shifts you would not walk out of the area because you would just get backed up in what you are doing. (10.11)

I've found it quite difficult, I'm an analyst so I work in the lab, so a lot of the activities, I do are like experiments, and things, a lot of it is time critical, so I makes it quite difficult to break off, and allow yourself the time to eat regular snacks and regular glasses of water, I mean I do it as and when I can, it's difficult when you are busy if I ever have a desk day, I drink as I go I find it a lot easier and I when I'm based in the lab I find it really difficult, you cannot even take water into the lab, you cannot do it, so it involves going to the other end of the building to get a drink.(2.14)

Participants in all locations of the business described the inability to control physical movement in terms of overload of meetings, e-learning and organisational noise that is driven towards them. They described some elements of the programme being good in theory, but without organisational support they felt that they were going against the grain in seeking permission to use resilient behaviours.

4.2.2 Sub theme: leader led change. Nine participants felt that leaders in the organisation were not supportive of new behaviours, with only two participants reporting positive experiences, overall there were large differences in how leaders supported employee resilience, with some leaders mocking the use of resilience behaviours. Many participants felt that their leaders had not attended the resilience programmes and felt a disconnect between teams and their leaders in living resilient behaviours.

I think it's not having support from your line managers, or you do not feel that encouragement from your line managers, it's okay if you do not do everything, but when you do not have the influence of the managers it's very difficult. So as to why it's probably that I think the support of managers is absolutely critical. It's not just going to the courses it's the following up on the plan. People are going to the courses are not they and do not allow people the opportunity to follow up on it. (12.27)

So for me it came from my then boss, I do not think she really understood, because basically the people who were saying I've got too much to do, the manager did not know what she was asking them to do, if you see what I mean, the work involved and how long it would take, so she'd hand out the tasks, and she then was quite, was quite, unsympathetic is quite harsh, yeah it was not until I was leaving and moving into my new role that she started getting involved in the day to day, she started seeing how long things really did take, so I think it was getting better, towards the end of my time in that team, but err yeah it was, a case of not getting involved in the day to day. When people were talking about their issues, and the time it was taking, it was almost like they were swinging the lead. But she did not put in the time because she obviously had a job to do, she's got to find the balance, but it did not seem the time was put in to understand exactly what it was that they were having to do. (7.47)

Where leaders tried to use resilience materials in seeking responses from teams regarding their level of stress, if individuals responded that they were strained or starting to feel overwhelmed this was rarely followed up; individuals therefore refrained from responding to these conversations. Participants perceived leaders to be unresponsive and unsympathetic when teams voiced concerns about work levels and continued to assign tasks when workload was already perceived to be too high.

4.3 Theme 3: purpose
4.3.1 Sub-theme: finding purpose. Participants struggled the most in answering questions about purpose and meaning in life, in responding to the questions posed during the interviews, many answered with rhetorical questions. As purpose is more ethereal, particularly those participants in more scientific roles had difficulty in grasping the concept. Others felt they were too busy in their everyday lives to find the time to reflect and focus on their life purpose. Only two of the twelve participants had clarity on their life purpose and how the way they lived their lives aligned to this, two participants felt they intrinsically knew their purpose but found it difficult to articulate.

It's made me think, I do not know if it prompted me more really cause I'm only a recent graduate, I have only been working for two years, so I was already starting to have thoughts about whether this

the really is this what I want to do? And it's definitely made me think about legacy, about whether I'm doing a job where I can make a change or whether I am more of a cog in a bigger space, am I making a difference, but I do not feel that every day does that make sense? (2.44).

Erm, I guess, it's dunno, more that it's a bit more hand wavy? the trouble with working in a scientific role you have to give a reason you have to justify things, whereas I found that a little a bit hard having a mission and a legacy, and things like that I found that a bit weird and that sort of thing and that was something I struggled within the course if I was to be asked the same question again I think it's something I would still struggle with that side of things (3.10).

I think you know what it is but it's hard to articulate it, that's the difficulty around spiritual energy, do you believe your purpose? Is this really what you are all about, it does make you question your everyday life, it's probably something, something you should give more time to it, I just found it difficult, do you really feel you are really making a difference in the world? A change in the world, I do not know? (11.21).

Analysis showed this to be the largest theme within the research, as finding meaning and purpose requires depth of thinking and reflection time. Many of the participants found it difficult to understand their life purpose or meaning of life, some participants remarked that it took a significant life event to influence their thinking around purpose, for example a relationship ending or physical health issues.

5. Implication of findings

Four overarching themes emerged from the data analysis, firstly participants reported the ability to make sustainable changes to their work and life through attendance on the personal resilience programme. Secondly, participants expressed themselves as victims of the organisational culture which encourages busyness and described the organisation as one that frowns upon using resilient behaviours learnt within the programme. The third factor was the lack of leadership support in understanding the pressures of daily working life for the participants and lack of leader encouragement to use resilient behaviours in order to mitigate this. Fourthly, most participants found it difficult to articulate or figure out their life purpose and how this applied to their chosen work field.

5.1 Habit changes

Participants found that creating a plan for new habits during the programme and placing conscious attention on them allowed the creation of new resilient habits. They found after time the repetition of new conscious behaviours required no conscious effort, which is line with the research of Wood et al. (2012). It could therefore be argued that training has a direct impact on the creation of new habits despite, the argument of Salas et al. (2006) that it is purely environmental factors in the workplace or the transfer climate that actively influences the transfer of training. Some participants stated that a change in mindset was required to achieve their new habit and understanding of the change curve and the emotions they could expect during the process of the habit change was central to achieving their goals (Braun et al., 2017; Citrin, 2017; McCann et al., 2009). The need for a change in mindset or cognitive schema, the understanding of what is or what is not reported by participants, requires the unlearning and freezing of existing neural pathways created through previous learning and experience. In the suspense of habitual streams of thought, releasing prior judgement and challenge to existing mindset and schemas, new experience and knowledge is gained (Elsbach et al., 2005). Participants in forming new habits reported improved mental and physical health, increased attention on home and work life balance, and more personal contact with friends and social networks. Participants also reported feeling more grounded, placing a much larger emphasis on healthy eating and taking better care of their overall health.

5.2 Busyness

Busyness was a central theme within the overall theme of organisational culture, participants described themselves as victims of busyness and the need to fit in with the perception of being busy. The implication of this meant that participants rarely took breaks from their work, perceiving themselves as having too much to do. In some areas of the business this was frowned upon more than others, those participants situated in manufacturing sites with roles in operations or laboratories felt more pressure to conform to cultural norms. Participants described lack of opportunity to eat, drink and take breaks, breaking the status quo in order to do this, one participant on moving to a new site stated that he no longer went home feeling hungry.

Historically within society a preciousness has been attached to scarcity of goods, more recently this has moved to a scarcity of individuals with busyness and overwork becoming a status symbol with positive inference attached to long work hours and lack of leisure time (Bellezza *et al.*, 2017). Social research can explain this, as busy individuals have desired human capital characteristics for example, competence and ambition, which is seen as scarce and therefore in demand. Those who are perceived to be busy at work are perceived to be of high statute, therefore individuals desire busyness in finding life meaning and motivation. Social researchers question whether individual perception of busyness is linked to physiological stance, long hours or whether busyness is a social construct driven from the density of work. Participants expressed their experiences of busyness in terms of a social construct, the density of their work rather than physiological busyness (Wilcox *et al.*, 2016).

This shift in the status of those who are perceived to be busy can also be linked to expert knowledge and demand for human capital, as organisations compete to hire the best talent. Long working hours within the talent war equating to individuals who possess desirable human capital capability, commanding higher status, greater work success and greater social affirmation (Bjornskov *et al.*, 2013). Negative effects of cognitive busyness include a weakening of organisational culture, creating overinflated impression management in order to see oneself in a positive, overconfident light and a tendency to distort non-busyness to appear normatively appropriate (Lawani, 2009). A negative correlation was found between cognitive busyness and working memory capacity reducing the ability to perform certain tasks and increased motivation to complete tasks too quickly affecting organisational output (Ho-Ying *et al.*, 2007). The term busy has become a modern-day phrase, creating an impression of lack of choice over how time is spent and is linked to narcissistic behaviours in bolstering people's sense of self by enhancing self-importance (Kim *et al.*, 2019).

5.3 Leader-led change

Participants found that on completion of the programme they failed to receive support from their leaders to make changes in their daily habits, and no follow up was attempted by leaders to acknowledge the action's participants had set for themselves. Others found that in addition to the lack of support leaders were openly sceptical about the programme although they had not attended in person and voiced that it was "too soft". Most of the participants could not recall leaders modelling resilient behaviours and on one site where an attempt was made by a leader to use the resilience materials there was no follow up when team members raised their concerns. Participants felt disappointment around the expectations of leaders in respect of demonstrating resilient behaviours.

Whilst much of the transfer research supports the consensus that participants of programmes should be encouraged to practise and master their new habits in addition to reinforcement and feedback from leaders who have attended the same programme and that support from peers and leaders is the catalyst in encouraging and modelling new behaviours. Perhaps the lack of leader engagement with the participants can be explained by social exchange theory or leader–member

exchange (LMX) which holds that positive behavioural and attitudinal relationships are reciprocated or exchanged between leaders and followers. LMX also recognises that relationships with leaders differ between followers based on leadership style, transformational leaders being more invested in the personal development of followers. Other factors that influence leader follower relationships is the time available for interaction, energy levels of the leader and resources available to them at a given time (Rhoades and Eisenberger, 2002).

5.4 Finding purpose

Participants found thinking about purpose in life one of the most challenging parts of the programme, although examining life purpose prompted participant thinking they found it difficult to articulate, participants used words such as challenging, difficult, soul searching to describe their experiences in trying to respond to the questions they posed to themselves about life purpose. Participants questioned their values and whether they were truly living them, others found it difficult to connect to their purpose daily. Whilst participants were able to grasp that having a purpose was important for daily motivation and challenge (Bartres-Faz *et al.*, 2018), only one participant was able to demonstrate how a negative emotional situation had led to finding their purpose which supporting the research of Schaefer *et al.* (2013). It could be argued that the lack of meaning in life is the catalyst in the process to seek meaning. (Steger and Kashdan, 2007). The lack of meaning or purpose in life has been positively correlated with depressive mood, and neuroticism, however the negative emotion surrounding lack of meaning in life have also been found to be the drive to activate meaning of life thinking which supports participant experience.

One explanation for the difficulty participants experienced in understanding meaning and purpose in life can be explained in the complexity of the concept as it involves both subjective and psychological well-being insight, requiring the two to be interconnected Positive psychology supports the argument that happiness is derived from a combined theoretical approach of subjective well-being and psychological well-being and it is the combination of both theories that creates a meaningful life (Seligman, 2002). It could be argued that the lack of meaning in life is the catalyst in the process to seek meaning (Steger and Kashdan, 2007). A second explanation for participant challenge in examining life purpose and meaning may be unearthed in individual gratefulness and the attention this brings to experiences in life that are significant and important. If individuals are already grateful for the life they live, then they may need to attach further meaning to their current life experience (King *et al.*, 2006).

5.5 Strengths and limitations of research

As this is the first study within a large pharmaceutical manufacturing environment this study is a baseline for further studies to be conducted to compare the results, consider variations and what lies beneath the variation, it would be important to note the similarities and differences and whether the fluid nature of organisations influences research outcomes at a given time. One strength of the research is that all participants were recruited from a pool of employees that had completed the programme at least one year before the research began, this allowed for reporting of the long-term effects of the programme. One of the limitations of the research is that previous studies were conducted in other environments such as the public sector, health sector and army situations and offer limited comparison, also the findings were taken from one specific programme and further research could include the comparison of this programme and the content of other linked programmes.

5.6 Implications for practitioners

Whilst all participants saw an increase in energy and resilience as result of attending the personal resilience programme, in meeting participant expectations it is recommended that

more focus is placed on leaders' understanding and modelling of resilient behaviours. Participants also felt that attention should also be given to how the programme is marketed to its target audience that is an opportunity to increase overall performance and not a mental health intervention, they also found open registration, working in non-peer groups allowed the opportunity to speak more freely.

6. Recommendations and conclusions

Resilience levels are malleable and are therefore suitable for intervention and can be increased through well designed resilience training. Resilience training has a positive effect on mental health, subjective well-being and observed behavioural performance (Arnetz, 2009; Pipe *et al.*, 2012). Whilst resilience programmes have historically been introduced as a primary prevention programme against stress, adverse mental health and increased subjective well-being. Recently programmes have been positively associated as enablers for the transformation of underperforming organisations, supporting organisational transformation and culture change, a core culture builder in start-ups with resilience underpinning, supporting and enhancing other performance goals (Cooper *et al.*, 2013).

The research confirmed that individuals are able to increase energy and resilience in one or more resilience dimensions through attendance on a one-day work-based resilience programme. All participants were able to make conscious sustainable behavioural changes and form new habits as a result of the programme. Whilst the culture of the organisation failed in some circumstances to support new behaviours required for individuals to experience higher resilience levels, the participants self-efficacy, confidence and giving of permission to themselves to change and practise within a difficult work environment resulted in increased resilience (Blume *et al.*, 2010; Veluda *et al.*, 2007). Participants through changes in physical health, for example, nutrition, sleep patterns and hydration experienced better physical, emotional and mental health. Participants commented that the programme was insightful, life changing, and they felt proud to work in an organisation that invested in improving lives. Participants also felt that the post-programme support in the form of job plus coaching was impactful. Participants felt they were able to deal with change more effectively in having an awareness of the change curve and were able to move more quickly emotionally through change cycles and support others. In having a heightened awareness of emotional intelligence participants found they were able to take more responsibility for their emotions and the impact these emotions had on others. Half of the participants made changes around multitasking habits and stated that they had changed their habits to focussing on prioritising tasks and focussing on these until completion. As this is the first study incorporating the specific resilience dimensions of agility, physical, emotional, mental, spiritual and recovery, and a first in this type of environment it is important that future research should focus on the replication of this study using the same methods to afford validity and reliability.

References

Armstrong, A.R., Galligan, R.F. and Critchley, C.R. (2011), "Emotional intelligence and psychological resilience to negative life events", *Personality and Individual Differences*, Vol. 51, pp. 331-336.

Arnetz, B., Nevedal, D., Lumley, M., Backman, L. and Lublin, N. (2009), "Trauma resilience training for police: psychophysiological and performance effects", *Journal of Police and Criminal Psychology*, Vol. 24 No. 1, pp. 1-9.

Avilia, M., Correa, J., Lucchetti, A. and Lucchetti, G. (2018), "The role of physical activity in the association between resilience and mental health in older adults", *Journal of Aging and Physical Activity*, Vol. 26, pp. 248-253.

Baldwin, T., Ford, K. and Blume, B. (2009), "Transfer of Training 1988-2008: an updated review and agenda for future research", *International Review of Industrial and Organizational Psychology*, Vol. 24, pp. 41-70.

Bartres-Faz, D., Cattaneo, G., Solana, J., Tormos, J. and Pascual-Leone, A. (2018), "Meaning in life; resilience beyond reserve", *Alzheimer's Research and Therapy*, Vol. 10, p. 47.

Bell, B. and Moore, O. (2018), *Learning, Training and Development in Organizations: Emerging Trends, Recent Advances, and Future Directions*, Cornell University, ILR School, available at: digitalcommons.ilr.cornell.edu/articles/1298 (accessed 17 June 2019).

Bellezza, S., Paharia, N. and Keinan, A. (2017), "Conspicuous consumption of time: when busyness and lack of leisure time become a status symbol", *Journal of Consumer Research*, Vol. 44 No. 1, pp. 118-138.

Bjornskov, C., Dreher, A., Fischer, J., Schnellenbach, J. and Gehring, K. (2013), "Inequality and happiness: when perceived social mobility and economic reality do not match", *Journal of Economic Behaviour and Organization*, Vol. 91, pp. 75-92.

Blume, B., Ford, J., Baldwin, T. and Huang, J. (2010), "Transfer of training: a meta analytic review", *Journal of Management*, Vol. 39, pp. 1065-1105.

Braun, T., Hayes, B., Frautschy De Muth, R. and Tran, O. (2017), "The development, validation and practical application of an employee agility and resilience measure to facilitate organizational change", *Industrial and Organizational Psychology*, Vol. 10 No. 4, pp. 703-723.

Brown, T. and Warren, A. (2009), "Distal goal and proximal goal transfer of training interventions in an executive education program", *Human Resources Development Quarterly*, Vol. 27, pp. 349-372.

Burton, N., Pakenham, K. and Brown, W. (2010), "Feasibility and effectiveness of psychosocial resilience training: a pilot study of the READY program", *Psychology, Health and Medicine*, Vol. 15 No. 3, pp. 266-277.

Chesak, S., Bhagra, A., Schroeder, D., Foy, D., Cutshall, S. and Sood, A. (2015), "Enhancing resilience among new nurses: feasibility and efficacy of pilot intervention", *The Ochsner Journal*, Vol. 15, pp. 38-44.

Childs, E. and De Wit, H. (2014), "Regular exercise is associated with emotional resilience to acute stress in healthy adults", *Frontiers in Physiology*, Vol. 5 No. 161, pp. 1-7.

Chinchanachokchai, S., Duff, B. and Sar, S. (2015), "The effect of multitasking on time perception, enjoyment and ad evaluation", *Computers in Human Behavior*, Vol. 45, pp. 185-191.

Citrin, R. (2017), "Meet change with resilience and agility", *American Association of Management*, Vol. 3 No. 1, pp. 30-33.

Clapp, C., Rubens, M. and Gazzaley, A. (2010), "Mechanisms of working memory disruption by external interference", *Cereb Cortex*, Vol. 20, pp. 859-872.

Cohen, R., Bavishi, C. and Rozanski, A. (2016), "Purpose in life and its relationship to all-cause mortality and cardiovascular events", *Psychosomatic Medicine*, Vol. 78 No. 2, pp. 122-33.

Connor, K. and Davidson, J. (2003), "Development of a new resilience scale: the Connor-Davidson resilience scale (CD-RISC)", *Depression and Anxiety*, Vol. 18, pp. 76-82.

Cooper, C., Flint-Taylor, J. and Pearn, M. (2013), *Building Resilience for Success*, Macmillan, Basingstoke, Palgrave.

Cromwell, S. and Kolb, J. (2004), "An examination of work-environment support factors affecting the transfer of supervisory skills training to the workplace", *Human Resource Development Quarterly*, Vol. 15, pp. 449-471.

Elsbach, K.D., Barr, P.S. and Haragdon, A.B. (2005), "Identifying situate cognition in organizations", *Organization Science*, Vol. 16 No. 4, pp. 422-433.

Flowers, P., Knussen, C. and Duncan, B. (2001), "Re-appraising HIV testing among Scottish gay men", *Journal of Health Psychology*, Vol. 6, pp. 665-678.

Gardner, B., Lally, P. and Wardle, J. (2012), "Making health habitual, the Psychology of 'habit formation' and general practice", *British Journal of General Practice*, Vol. 62 No. 605, pp. 664-666.

George, L. and Park, C. (2013), "Are meaning and purpose distinct? An examination of correlates and predictors", *Journal of Positive Psychology*, Vol. 8 No. 5, pp. 365-75.

Geraerts, E., Merckelbach, H., Jelicic, M. and Habets, P. (2007), "Suppression of intrusive thoughts and working memory capacity in repressive coping", *American Journal of Psychology*, Vol. 2, pp. 205-218.

Gilpin-Jackson, Y. and Bushe, G. (2007), "Leadership development and training transfer: a case study of post-training determinants", *Journal of Management Development*, Vol. 26, pp. 980-1004.

Goldstein, A. and Walker, M. (2014), "The role of sleep in emotional brain function", *Annual Review of Clinical Psychology*, Vol. 10, pp. 679-708.

Grady, C., Protzner, A., Kovacevic, N., Strother, S., Afshin-Pour, B., WojtowiczAnderson, M.J.A., Churchill, N. and McIntosh, A. (2009), "A multivariate analysis of age- related differences in default mode and task-positive networks across multiple cognitive domains", *Cereb Cortex*, Vol. 20, pp. 1432-1437.

Grossman, R. and Salas, E. (2011), "The transfer of training: what really matters", *International Journal of Training and Development*, Vol. 15 No. 2, pp. 103-120.

Health and Safety Executive (2018), "Work-related stress, depression or anxiety statistics in Great Britain", available at: http://www.hse.gov.uk/statistics/causdis/stress.pdf (accessed 17 March 2018).

Heintzelman, S. and King, L. (2014), "Life is pretty meaningful", *American Psychologist*, Vol. 69 No. 6, pp. 561-574.

Ho-Ying, F., Morris, M., Lee, S.-L., Chao, M., Chui, Y. and Hong, Y.-Y. (2007), "Epistemic motives and cultural conformity: need for closure, culture and context as determinants of conflict judgements", *Journal of Personality and Social Psychology*, Vol. 92 No. 2, pp. 191-207.

Holmes, P.V. (2014), "Trophic mechanisms for exercise- induced stress resilience: potential role of interaction between BDNF and Galanin", *Front Psychiatry*, Vol. 5, p. 90.

Irwin, M., Olmstead, R. and Carroll, J. (2016), "Sleep disturbance, sleep duration, and inflammation: a systematic review and meta-analysis of cohort studies and experimental sleep deprivation", *Biological Psychiatry*, Vol. 80, pp. 40-52.

Jackson, D., Firtko, A. and Edenborough, M. (2007), "Personal Resilience as a strategy for surviving and thriving in the face of workplace adversity: a literature review", *Journal of Advances Nursing*, Vol. 60 No. 1, pp. 1-9.

Jeong, S. and Hwang, Y. (2016), "Media multitasking effects on cognitive vs. Attitudinal outcomes: a meta-analysis", *Human Communication Research*, Vol. 42, pp. 599-618.

Jung, Y.-H., Ha, M., Oh, C., Lee, U., Jung, J.H., Jungwon, K., Park, J. and Kang, D. (2016), "The effects of an online mind-body, training program on stress, coping strategies, emotional intelligence, resilience and psychological state", *PloS One*, Vol. 11 No. 8.

Karpinen, P., Kukkanen, H., Alahavala, T., Jokelainen, T., Teeriniemi, A.-M., Salonurmi, T. and Savolainen, M. (2018), "Opportunities and challenges of behavior change support systems for enhancing habit formation: a qualitative study", *Journal of Biomedical Information*, Vol. 84, pp. 82-92.

Kim, J., Wadhwa, M. and Chattopadhyay, A. (2019), "When busy is less indulging: impact of busy mindset on self-control behaviours", *Journal of Consumer Research*, Vol. 45, pp. 933-952.

King, L.A., Hick, J.A., Krull, J.L. and Del Gaiso, A.K. (2006), "Positive affect and the experience of meaning of life", *Journal of Personality and Social Psychology*, Vol. 90, pp. 179-196.

Lawani, A.K. (2009), "The distinct influence of cognitive busyness and need for closure on cultural differences in socially desirable responding", *Journal of Consumer Research*, Vol. 36, pp. 305-316.

Locke, E. (2005), "Why emotional intelligence is an invalid concept", *Journal of Organisational Behaviour*, Vol. 26, pp. 425-431.

Lui, Y., Wang, Z., Zhou, C. and Li, T. (2014), "Affect and self-esteem as mediators between trait resilience and psychological adjustment", *Personality and Individual Differences*, Vol. 66, pp. 92-07.

Lutz, I., Gaffney-Stomberg, R., Williams, K., McGraw, S., Niro, J., Karl, P., Cable, S., Croppper, T. and McClung, J. (2016), "Adherence to the dietary guidelines for Americans is associated with psychological resilience in young adults: a cross sectional study", *Journal of the Academy of Nutrition and Dietetics*, Vol. 117 No. 3, pp. 395-406.

Magnano, P., Caraparo, G. and Paollillo, A. (2016), "Resilience and emotional intelligence: which role in achievement motivation", *International Journal of Psychology Research*, Vol. 9 No. 1, pp. 9-20.

Mayer, J., Salovey, P. and Caruso, D. (2004), "Emotional intelligence: theory, findings and implications", *Psychological Inquiry*, Vol. 15, pp. 197-215.

McCann, J., Selsky, J. and Lee, J. (2009), "Building agility, resilience and performance in turbulent environments", *People and Strategy*, Vol. 32 No. 3, pp. 44-51.

McCraty, R. and Atkinson, M. (2012), "Resilience training program reduces physiological and psychological stress in police officers", *Global Advances in Health and Medicine*, Vol. 1 No. 5, pp. 44-66.

Michie, S., Hendy, J., Smith, J.A. and Ashead, F. (2004), "Evidence into practice: a theory-based study of achieving national health targets in primary care", *Journal of Evaluation in Clinical Practice*, Vol. 10, pp. 447-456.

Millear, P., Lissosis, P., Shochet, I., Biggs, H. and Donald, M. (2008), "Being on PAR, outcomes of a pilot trial to improve mental health and wellbeing in the workplace with the promoting adult resilience (PAR) programme", *Behaviour Change*, Vol. 25, pp. 215-228.

Munkata, Y., Herd, S., Chatham, C., Deoue, B., Banich, M. and O'Reilly, R. (2011), "A unified framework for inhibitory control", *Trends in Cognitive Sciences*, Vol. 15, pp. 453-459.

O'Dougherty, M., Wright, M., Masten, A. and Narayan, A. (2013), "Resilience processes in development: four waves of research on positive adaption in the context of adversity", Goldstein, S. and Brooks, R.B. (Eds), *Handbook of Resilience in Children*, 2nd ed., Springer US, New York, NY.

Perrone- Bertolotti, M., Rapin, L., Lachaux, J., Baciu, M. and Lovenbruick, H. (2014), "What is that little voice inside my head? Inner speech phenomenology, its role in cognitive performance, and its relationship to self-monitoring", *Behavioural Brain Research*, Vol. 261, pp. 220-239.

Pipe, T., Buchda, V., Launder, S., Hudakk, B., Hulvey, L., Karns, K. and Pendergast, D. (2012), "Building personal and professional resources of resilience and agility in the healthcare workplace", *Stress and Health*, Vol. 28, pp. 11-22.

Pistollato, F., Sumalla Cano, S., Ellio, I., Vergara, M., Giampieri, F. and Battino, M. (2016), "Associations between sleep, cortisol regulation and diet: possible Implications for the risk of Alzheimer disease", *Advanced Nutrition*, Vol. 7 No. 4, pp. 679-689.

Reid, K., Flowers, P. and Larkin, M. (2008), "Interpretive phenomenological analysis: an overview and methodological review", *The Psychologist*, Vol. 18, pp. 20-23.

Reivich, K.J., Seligman, M.E.P. and McBride, S. (2011), "Master resilience in the U.S. army", *American Psychologist*, Vol. 66 No. 1, pp. 25-34.

Rhoades, L. and Eisenberger, R. (2002), "Perceived organisational support; a review of the literature", *Journal of Applied Psychology*, Vol. 87 No. 4, pp. 698-714.

Rienks, J., Dobson, A. and Mishra, G. (2013), "Mediterranean dietary pattern and prevalence and incidence of depressive symptoms in mid-aged women: results forma large community-based prospective study", *European Journal of Clinical Nutrition*, Vol. 67, pp. 75-82.

Robertson, I., Cooper, C., Sarkar, M. and Curran, T. (2015), "Resilience training in the workplace from 2003 to 2014: a systematic review", *Journal of Occupational and Organizational Psychology*, Vol. 88, pp. 553-562.

Rogerson, S., Meir, R., Crawley-McHattan, Z., McEwan, K. and Pastoors, R. (2016), "A randomized controlled pilot trial investigating the impact of a workplace resilience program during a time of significant organizational change", *Journal of Occupational and Environmental Medicine*, Vol. 58 No. 4, pp. 329-334.

Salas, E., Wilson, K., Priest, H. and Guthrie, J. (2006), *Design, Delivery and Evaluation of Training Systems, Handbook of Human Factors and Ergonomics*, John Wiley and Sons, New Jersey, NJ.

Schaefer, S., Boylan, J.M., Van Reekum, C., Lapate, R., Norris, C., Ryff, C. and Davidson, R. (2013), "Purpose in life predicts better emotional recovery from negative stimuli", *PloS One*, Vol. 8, p. 11.

Seligman, M.E. (2002), *Authentic Happiness. Using the New Positive Psychology to Realize Your Potential for Lasting Fulfillment*, Nicholas Brealey, London.

Sherlock-Story, M., Moss, M. and Timson, S. (2013), "Brief coaching for resilience during organisational change-an explanatory study", *The Coaching Psychologist*, Vol. 9, pp. 19-26.

Silverman, D. (2007), *A Very Short, Fairly Interesting Book and Reasonably Cheap Book about Qualitative Research*, Sage, London.

Smith, J.A. (2011), "Evaluating the contribution of interpretative phenomenological analysis", *Health Psychology Review*, Vol. 5, pp. 9-27.

Smith, J.A. and Osborn, M. (2003), "Interpretative phenomenological analysis", in Smith, A. (Ed.), *Qualitative Psychology: A Practical Guide to Research Methods*, Sage, London, pp. 51-80.

Smith, B., Tooley, E., Montague, E., Robinson, A., Cosper, G. and Mullins, P. (2009), "The role of resilience and purpose in life in habituation to heat and cold pain", *The Journal of Pain*, Vol. 10 No. 5, pp. 493-500.

Smith, J.A., Flowers, P. and Larkin, M. (2012), *Interpretive Phenomenological Analysis, Theory, Method and Research*, Sage, London.

Southwick, S., Bonanno, G., Masten, A., Panter-Brick, C. and Yehuda, C. (2014), "Resilience definitions, theory, and challenges: interdisciplinary perspectives", *European Journal of Psychotraumatology*, Vol. 5 No. 1, pp. 1-14.

Steger, M. and Kashdan, T.B. (2007), "Stability and specificity of meaning in life and life satisfaction over 1 year", *Journal of Happiness Studies*, Vol. 8, pp. 161-179.

Taylor, P., Russ-Eft, D. and Chan, D. (2005), "A meta analytic review of behavior modeling training", *Journal of Applied Psychology*, Vol. 90, pp. 692-709.

Vandekerckhove, M. and Cluydts, R. (2010), "The emotional brain and sleep: an intimate relationship", *Sleep Medicine Reviews*, Vol. 14, pp. 219-226.

Vanhove, A., Herigan, M., Perez, A., Harms, P. and Lester, P. (2016), "Can resilience be developed at work? A meta-analytic review of resilience-building programme effectiveness", *Journal of Occupational and Organizational Psychology*, Vol. 89, pp. 278-307.

Veluda, R., Caetano, A., Michel, J., Lyons, B. and Kavanagh, M. (2007), "The effects of training design, individual characteristics and work environment on transfer of training", *International Journal of Training and Development*, Vol. 11, pp. 282-294.

Waite, P. and Richardson, G. (2004), "Determining the efficacy of resiliency training at the work site", *Journal of Allied Health*, Vol. 33 No. 3, p. 178.

Wang, Z. and Tchernev, J. (2012), "The 'myth' of media multitasking; Reciprocal dynamics of media multitasking, personal needs and gratifications", *Journal of Communication*, Vol. 6, pp. 493-513.

Waterhouse, L. (2006), "Multiple intelligences, the Mozart effect, and emotional intelligence. A critical review", *Educational Psychologist*, Vol. 41, pp. 207-225.

Wilcox, K., Laran, J., Stephem, A. and Zubcsek, P. (2016), "How being busy can increase motivation and reduce task completion time", *Journal of Personality and Social Psychology*, Vol. 110 No. 3, pp. 371-84.

Windsor, T. and Curtis, R. (2015), "Sense of purpose as a psychological resource for aging well", *Developmental Psychology American Psychological Association*, Vol. 51 No. 7, pp. 975-986.

Wood, W., Neal, D., Labrecque, J. and Lally, P. (2012), "How do habits guide behavior? Perceived and actual triggers of habits in daily life", *Journal of Experimental Social Psychology*, Vol. 48, pp. 492-498.

Yoo, S., Gujat, N., Hu, P., Jolesz, F. and Walker, M. (2007), "The human emotional brain without sleep - a prefrontal amygdala disconnect", *Current Biology*, Vol. 17, pp. 877-878.

Zschucke, E., Renneburg, B., Dimeo, F., Wustenburg, T. and Strohle, A. (2015), "The stress-buffering effect of acute exercise: evidence for HPA axis negative feedback", *Psychoneuroendocrinology*, Vol. 51, pp. 414-425.

About the author

Frances Costello is an experienced organisational development consultant with vast experience in organisational psychology, she works with a range of clients both large global organisations and smaller SMEs. She has worked in the field for over 18 years and has a track record of changing the mindset, energy and resilience and confidence levels of leaders achieving an overall growth impact on the performance of businesses. Fran specialises in leadership and team development, coaching and resilience and brings her background in personal and business psychology to each organisation in her unique style. She also works on a one to one basis as a psychotherapist and coach with people from all walks of life. Fran has a BA in Social Studies, a PGDip in Psychotherapy and Hypnotherapy and an MSc in Organisational and Business Psychology. She is an accredited coach, holds principle practitioner status with the association of business psychologists and is a DISC and MBTI practitioner and action learning facilitator. Fran's client experience includes GSK, Burtons Foods, the NHS, Daisy Plc, the Lake District National Park, EDF and several other smaller regional businesses. When Fran is not working, she enjoys singing with one voice an award-winning gospel choir and uses this as a tool to bring teams together. Frances Costello can be contacted at: frannycostello@googlemail.com