Developing Individual and Team Resilience in Elite Sport: Research to Practice

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ABSTRACT
Drawing on the growing body of resilience research in elite sport, and the evaluation of the applied impact of this research with various national and international athletes and teams, the purpose of this article is to discuss the development of individual and team resilience with practical recommendations provided for athletes, coaches, and sport psychology practitioners operating in elite sport. Four overarching practical recommendations are provided to aid the development of individual resilience: ensure clarity of what resilience is and is not, enhance and refine personal qualities, evoke and maintain a challenge mindset, and create a facilitative environment. Furthermore, five psychosocial processes are outlined and practical recommendations are provided to develop team resilience: Transformational leadership, shared leadership, social identity, team learning, and team enjoyment and positive emotions. We hope that this article will help bridge the gap between research and practice in this area.

Why is it that some athletes and teams are able to withstand the pressures of elite sport and attain peak performances, whereas others succumb to the demands and under-perform? It is the study and application of individual and team resilience that aims to address this question. Resilience and its development has arguably become one of the most talked about topics in elite sport over the last few years. Indeed, hardly a day passes without an elite athlete or team being quoted reflecting on the significant role of resilience in performing under pressure. In support of this statement, the importance of resilience was emphasized in the Duty of Care in Sport UK government review published by Baroness Grey-Thompson in 2017. Specifically, in the section on mental welfare, the report stated that “the routine element of elite sport, where the regimen is one of continuous training, performance, and selection, brings significant mental resilience challenges for both participants and coaches” (p.22), and for those on a high performance pathway, “Mental resilience is not something that all
participants and coaches automatically have and this should be developed with the same consideration that physical resilience is built” (p. 23).

To aid practitioners’ knowledge and understanding of resilience development, over the last decade or so, there has been a burgeoning body of empirical evidence investigating individual resilience (see, for a review, Bryan et al., 2019) and team resilience (see, for a review, Morgan et al., 2017) in elite sport. Drawing on the body of research in this area, over the last five years or so, applied work has concurrently been conducted with various national and international athletes and teams to develop resilience for sustained success and wellbeing. Based on this resilience research and the evaluation of the applied impact of this research in elite sport in this article, the development of individual and team resilience is discussed with practical recommendations provided for athletes, coaches, and sport psychology practitioners operating in elite sport. We hope that this article will help bridge the gap between research and practice in this area.

**Developing individual resilience**

One such approach to resilience development that has been widely used in elite sport is a programme of mental fortitude training (Fletcher & Sarkar, 2016; Sarkar, 2018). Drawing on this evidence-based programme, underpinned by resilience research in sport (see, for a review, Bryan et al., 2019), a user-friendly infographic was recently created for dissemination amongst athletes, coaches, and sport psychology practitioners (see Figure 1). From this, and our impact evaluation findings, four overarching practical recommendations are provided to aid the development of individual resilience.

**Ensure clarity of what resilience is and is not**

With resilience being a “buzzword,” the meaning of the term has started to be somewhat lost in translation, which can lead to misunderstanding (see points 1 and 8 in the infographic for two examples). In Table 1, we have provided some key points regarding what resilience is and is not. It is especially worth noting that rather than being a fixed trait that individuals either have or don’t have (which puts the individual at the heart of resilience development), resilience is a context-specific capacity that can be developed and trained over time (which recognizes the role of the environment in developing resilience). Our impact evaluation findings suggest that the main benefits of ensuring definitional clarity is everyone having a “common language” about resilience, better communication when talking about resilience with players, strengthened collaboration between coaches and sport psychology practitioners, and ultimately a more accurate and consistent approach to resilience development.
Enhance and refine personal qualities

The cornerstone of the mental fortitude training programme is an individual's personal qualities, which can be described as the psychological factors that protect an individual from negative consequences (cf. Fletcher & Sarkar, 2012, see points 2–4 in the infographic). In the mental fortitude training programme within the area of personal qualities, we differentiate...
between personality characteristics, psychological skills and processes, and desirable outcomes that protect an individual from negative consequences (see, for a review, Fletcher & Sarkar, 2016). The most salient, evidence-based personal qualities for developing individual resilience are categorized and summarized in Table 2. It is important to note that the relevance and importance of these qualities will vary across contexts and time. For example, in the elite sport domain, demonstrating resilience to training-related stressors will likely necessitate a different combination of personal qualities than those needed to withstand competition-related stressors. Another point worth reinforcing is that personality characteristics are less amenable to change than psychological skills, both of which underpin desirable outcomes. Hence, in terms of the developmental potential of individual resilience, there are aspects of an individual’s psyche which are more malleable than others. Based on this observation, we refer to an individual’s ‘resilience bandwidth’ as an indication of his or her natural developmental trajectory compared to his or her point of highest potential with psychosocial intervention (see, for a review, Fletcher & Sarkar, 2016).

**Evoke and maintain a challenge mindset**

Arguably the pivotal point of any resilience training programme is for individuals to positively evaluate and interpret the pressure they encounter, together with their own resources, thoughts, and emotions (Fletcher & Sarkar, 2012, 2016). The focus here is on how individuals react to stressors and adversity, rather than the environmental events themselves. Based on the work that the U.S. Army has initiated to develop resilience in soldiers (Casey, 2011), drawing on cognitive-behavioral and rational-emotive behavioral therapies, seven practical skills are proposed to develop a challenge mindset (see, for a review, Reivich & Shatte, 2003). These are learning your ABCs, avoiding thinking traps, detecting icebergs (i.e., deeply held beliefs), challenging beliefs (via problem solving), putting it into perspective (minimising catastrophic thinking), calming and focusing (via energy management), and fighting back against counterproductive thoughts in real time.
Learning your ABCs is the foundational skill that underpins the remaining six skills of a challenge mindset. This is where individuals are taught how to identify thoughts that are triggered by activating events and to identify reactions that are driven by those thoughts. Athletes would learn to recognize an activating event (A), their beliefs (B) about the activating event, and the emotional and behavioral consequences (C) of those thoughts. Athletes would work through a series of professional and personal activating events with the goal of being able to separate the activating events from what they say to themselves and the emotions/behaviors their thoughts generate. Subsequently, athletes would look for thought patterns that are driving adaptive outcomes and patterns that are driving counterproductive outcomes. The goal at the end of this exercise is to have athletes distinguish activating events, thoughts, and consequences. Once athletes

### Table 2. Salient personal qualities for individual resilience (reproduced with permission from Fletcher & Sarkar, 2016).

<table>
<thead>
<tr>
<th>Type of personal quality</th>
<th>Personal quality (and related terms)</th>
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<tbody>
<tr>
<td><strong>Personality characteristic</strong></td>
<td>• Outgoing and seek attention from others (extraverted)</td>
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<tr>
<td></td>
<td>• Thorough and concerned about doing things correctly (conscientious)</td>
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<td></td>
<td>• High personal standards (perfectionist)</td>
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<td></td>
<td>• Positive expectations about the future (optimistic, hopeful)</td>
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<td></td>
<td>• A grandiose view of oneself and feelings of entitlement (narcissistic)</td>
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<tr>
<td></td>
<td>• Subdued experience or expression of emotions (alexithymic)</td>
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<tr>
<td></td>
<td>• Compares oneself to others (competitive)</td>
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<tr>
<td></td>
<td>• Creates or controls a situation (proactive)</td>
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<tr>
<td></td>
<td>• Enjoys doing activities and tasks (intrinsically motivated)</td>
</tr>
<tr>
<td></td>
<td>• Wants to demonstrate competence over others (ego orientated)</td>
</tr>
<tr>
<td></td>
<td>• Wants to demonstrate competence through personal improvement (task orientated)</td>
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<tr>
<td></td>
<td>• Able to maintain self-esteem by putting success down to own abilities and efforts, but putting failure down to external or transient factors (self-serving attributional style)</td>
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<tr>
<td></td>
<td>• Belief in oneself and one’s ability (self-confident)</td>
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<tr>
<td><strong>Psychological skill</strong></td>
<td>• An awareness of oneself, others, and the environment (self-awareness, social awareness)</td>
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<tr>
<td></td>
<td>• Direct thoughts and mental images (self-talk, imagery, mental rehearsal, visualization)</td>
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<tr>
<td></td>
<td>• Direct attention appropriately (attentional control)</td>
</tr>
<tr>
<td></td>
<td>• Regulate arousal levels (relaxation, activation, arousal control)</td>
</tr>
<tr>
<td></td>
<td>• Set effective goals (goal-setting)</td>
</tr>
<tr>
<td></td>
<td>• Plan for expected and unexpected events (preparation routines, VUCA (volatility, uncertainty, complexity and ambiguity) planning, ‘what if’ scenario analysis, ‘black swan’ event response)</td>
</tr>
<tr>
<td><strong>Desirable outcome</strong></td>
<td>• Optimally motivated (self-determined, intrinsically motivated)</td>
</tr>
<tr>
<td></td>
<td>• Regulate thoughts, mental images, and emotions (executive functioning, cognitive control, emotional regulation/control)</td>
</tr>
<tr>
<td></td>
<td>• Maintain attention on what matters (concentration, focus, control)</td>
</tr>
<tr>
<td></td>
<td>• Attain, maintain and regain confidence in oneself and others (confidence, self-efficacy)</td>
</tr>
<tr>
<td></td>
<td>• Handle pressure and deal with distress (stress management, coping)</td>
</tr>
<tr>
<td></td>
<td>• Automatically execute skills, processes, strategies and routines (automaticity)</td>
</tr>
<tr>
<td></td>
<td>• Recognize support (perceived social support)</td>
</tr>
<tr>
<td></td>
<td>• Manage relationships (emotional intelligence, communication)</td>
</tr>
<tr>
<td></td>
<td>• Work with the environment (political acuity)</td>
</tr>
</tbody>
</table>
are aware of their own thoughts, they are then in a more informed position to regulate their thoughts, for example, by challenging any unhelpful thoughts that make them more vulnerable to the negative effects of stress (see points 6-8 in the infographic and see Fletcher and Sarkar (2016), for some thought regulation strategies).

**Create a facilitative environment**

Although practitioners may find it tempting to focus on individuals’ ability to withstand pressure, they also need to pay attention to creating environments that athletes can thrive in as both a person and a performer (Fletcher & Sarkar, 2016; Sarkar, 2018). Of fundamental importance to developing high performance environments are the notions of challenge and support (see point 5 in the infographic). Challenge involves everyone (leaders, coaches, support staff, and athletes) having high expectations of one another, and helps to instill accountability and responsibility. Support refers to enabling people to develop their personal qualities, and helps to promote learning and build trust. Based on the notions of challenge and support, the environment that leaders and coaches create can be differentiated between four categories: low-challenge low-support; high challenge-low support; low challenge-high support; and high challenge-high support. These quadrants can be labeled as stagnant environment, unrelenting environment, comfortable environment, and facilitative environment respectively (see **Figure 2**). Each environment is characterized by different

![Figure 2. A challenge-support matrix for developing resilience (reproduced with permission from Fletcher & Sarkar, 2016).](image-url)
features, but for resilience to be developed for sustained success and well-being, a facilitative environment needs to be created and maintained (for a video animation description of this challenge-support matrix, see https://www.youtube.com/watch?v=o08CF5p8ck4).

Sport psychology practitioners can help coaches and support staff to provide an appropriate balance between challenge and support by engaging in pressure inurement training (Fletcher & Sarkar, 2016). Pressure inurement training involves gradually increasing the pressure on individuals via challenge and manipulation of the environment. Practitioners will need to carefully monitor how individuals react to these manipulations, both in terms of their psychological responses and other outcomes (i.e., wellbeing and performance). When the pressure exceeds the available resources, individuals are likely to react with more debilitative responses and negative outcomes, in which case increased motivational feedback and support should be provided, together with possibly temporarily decreasing the challenge. Conversely, when individuals react with more facilitative responses and positive outcomes, indicating that they are/have adapted to the pressure, then increased developmental feedback and challenge should be imposed (Sarkar & Hilton, 2020).

Our impact evaluation findings suggest that the challenge-support matrix can be a useful framework to audit the environment across teams/squads for needs analysis purposes. Based on the principles of pressure training, teams/squads have manipulated training in terms of competition simulation, auditory distractions, and communication restrictions. Across coaches, support staff and players, this has resulted in greater familiarity with challenging situations in competition, created better awareness in individuals about their own behavior and responses under pressure, developed and refined their personal resources (e.g., psychological techniques, problem-solving skills), promoted team processes including improving team connectivity and strengthening leadership, and ultimately enhanced individual and team performance under pressure.

**Developing team resilience**

In addition to investigating and applying resilience at the individual level, resilience researchers and practitioners have lately turned their focus to the group level (see, for a review, Morgan et al., 2017). Team resilience is defined as a “dynamic, psychosocial process which protects a group of individuals from the potential negative effect of the stressors they collectively encounter. It comprises of processes whereby team members use their individual and collective resources to positively adapt when experiencing adversity” (Morgan et al., 2013, p. 552). Our impact evaluation found that over half of respondents (58%) stated that team resilience research had
influenced practice within their team or organization. In addition, 48% said that by adopting the practices recommended within the research to enhance team resilience, they had improved the performance of their team, and 46% stated that mental well-being had improved. Drawing on the team resilience literature in elite sport (see Morgan et al., 2013, 2015, 2017, 2019), and our impact evaluation findings, five psychosocial processes are outlined and practical recommendations are provided to develop team resilience (see Table 3 for strategies and indicators for team resilience development).

**Transformational leadership**

Particularly during the early phase of a team's development, and especially when under pressure, transformational leadership is important for team resilience whereby an individual uses a variety of inspirational methods to positively influence the motivation, morale, and performance of team members during difficult or challenging situations (see Table 3). This could mean being brave enough to think longer term despite adversity by developing a collective vision and philosophy, and helping athletes to make sense of setbacks by encouraging them to reflect on the bigger picture (cf. Morgan et al., 2015). A leader, manager, or coach should consider focusing their attention on three key behaviors: *vision* (identify and articulate an optimistic vision for the future; communicate with enthusiasm and express confidence that the vision is attainable; act as a role model in attaining the vision), *challenge* (reinforce high standards and shared expectations; set goals that will stretch team members; encourage team members to self-manage and solve problems), and *support* (promote co-operation and teamwork toward common goals; provide motivational feedback in the form of encouragement; and show respect for team members and be concerned about their personal feelings and needs).

**Shared leadership**

Alongside transformational leadership, to facilitate team resilience, it is important that individual members in a team lead each other. According to Sir Clive Woodward, Head Coach of the 2003 England Rugby Union World Cup Winning team, shared team leadership ensures that the aim is “not just to have one leader in a team of followers, but to have an exceptional leader in a team of great leaders” (Morgan et al., 2015, p. 95). This not only develops leadership skills in others but, from a team resilience perspective, it also spreads ownership and accountability across the team during stressors (see Table 3). To encourage this shared approach to leadership, one useful strategy to consider is the creation of leadership
groups. In a sporting context, a leadership group typically involves several athletes who lead within their personal strengths to ultimately share and spread the team’s leadership workload and responsibilities on-field (e.g., decision-making, motivating teammates) and off-field (e.g., culture, player discipline). The creation of a leadership group improves team resilience since it promotes connectivity, ensures that players are “on the same wavelength” during setbacks, and enforces accountability by taking positive action (Morgan et al., 2015). When setting up a leadership group, coaches and sport psychology practitioners should consider the following areas:

- Clearly define roles;
- Establish group norms;

### Table 3. Strategies and indicators for team resilience development (adapted with permission from Morgan et al., 2019).

<table>
<thead>
<tr>
<th>Psychosocial process</th>
<th>Developmental strategies and indicators</th>
</tr>
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</table>
| Transformational leadership| - Build complementary coaching strengths and roles  
- Build commitment to, and alignment with, team goals  
- Define and reinforce collective “team protocols” during stressors  
- Reinforce high standards, shared expectations, and team values during stressors  
- Profile and recruit “team players” who will adopt a team approach  
- Communicate with enthusiasm and express confidence in the team during setbacks  
- Role model by leading by example during pressurized situations  |
| Shared leadership          | - Define leadership roles and responsibilities  
- Give team members responsibility for team functioning and communication during stressors  
- Hold regular team briefings to openly discuss team functioning during challenging situations  
- Encourage and monitor individual and collective performance and tasks  
- Encourage creativity within a broad structure  
- Exchange honest feedback and avoid blame  
- Create leadership groups to transfer responsibility for solutions to stressors  |
| Social Identity            | - Promote a sense of belonging and emotional attachment during difficult circumstances  
- Nurture quality, supportive squad relationships during setbacks  
- Frequent reinforce the importance of a “selfless team”  
- Display media reports in the changing rooms of team successes and celebrate “resilience” moments through team imagery, mantras, and logos  |
| Team Learning              | - Develop a shared understanding of systems and coordination to withstand pressurized situations  
- Replicate pressurized situations  
- Hold regular discussions about errors to encourage learning and problem solving  
- Practise “resetting” the team’s focus following challenging situations  
- Rehearse specific situations (what-ifs) and skills during pressurized conditions  
- Take ongoing action, analysis and adjustments to continuously improve despite setbacks  |
| Team Enjoyment and Positive Emotions | - Promote the importance of wellbeing and performance during challenging situations  
- Use humor during challenging situations  
- Plan and organize social occasions during setbacks or during fatigue  
- Promote perspective during stressors  
- Develop pre-match routines using a “business-as-usual” approach during pressurized situations |
- Have regular “touch points” to openly discuss different viewpoints;
- Encourage transparency and honest feedback;
- Provide a safe environment where group members feel comfortable to share ideas;
- Support autonomy where group members feel free to take initiative on assignments;
- Monitor and measure the leadership group’s individual and collective performance;
- Spend time discussing how the group will find consensus on tricky decisions to make.

**Social identity**

With the support of transformational leaders and shared leadership groups, to facilitate resilience in teams, it is important for teams to cultivate a distinctive social identity (see Table 3). This is where an individual’s sense of who they are is defined in terms of “we” and “us” rather than “I” and “me”. When personal identity (“I”) gives way to social identity (“we”), team members adjust their thoughts and behaviors to be aligned with those defined by the group. This, in turn, harnesses emotional attachment to the group and relational resources to promote team resilience. To cultivate a distinctive social identity, consider using the 5Rs approach (Haslam et al., 2017):

- **Readying**: Why does “we” matter?
  - Raise awareness of the importance of the team’s identity for team resilience.
- **Reflecting**: Who are we?
  - Define the team’s shared identity by reflecting on the team’s core values.
- **Representing**: What do we want to be?
  - Clarify group goals and barriers to achievement.
- **Realizing**: How do we become what we want to be?
  - Implement strategies to achieve group goals and embed group identity.
- **Reporting**: Are we becoming what we want to be?
  - Monitor progress toward team goals and troubleshooting.

**Team learning**

The third resource to enhance resilience in teams is team learning. This is where individuals collectively acquire and act on new knowledge following setbacks (see Table 3). In resilient teams, members know how
their team works together best, and can therefore adapt their behavior according to the demands placed on them. This common knowledge about what the team does and how members work together best helps the team to have a shared mental model. Teams with shared mental models interpret situations in a similar manner, anticipate and predict the needs of other teammates, make shared decisions, implicitly coordinate their actions and as a result, have overall improved performance.

Developing shared mental models and a common knowledge about team members helps teams to prepare for both routine and non-routine stressors because team members are able to accurately predict the needs of their teammates, make shared decisions, and implicitly coordinate their actions. A shared mental model helps to build the team's resilience as they can adapt and overcome adversity because they know what to do and can accurately predict what their teammates will do when stressful situations arise.

It is important that each team member has an effective shared mental model, which includes the following elements:

- **The problem/task**: Do we have a shared understanding of the problem and of what needs to be done here?
- **The team**: Do we have a clear understanding of our own roles in this, of each other's strengths and experience relevant to the task?
- **The strategy**: Do we have a clear, shared understanding of the most effective way to approach this? The tools, techniques, and resources we should be deploying?

There are a number of options for a team to develop a shared mental model for team learning purposes, including:

- **After action reviews**: Review performance on a particular project or task; what went well, what didn't, what surprised us, what would we do differently in future?
- **Team training**: Training as a team can be very effective, particularly employing activities like simulations, where the team gets to practice working through a problem together, and has the opportunity to reflect on the impact of their decisions, actions, and so on.
- **Team planning**: Although a team manager may often, for ease, take care of the planning, doing this as a team helps to develop the team's shared understanding of the task itself.
- **Away-days**: The aim of a ‘team away day’ differs between teams, but the main aim is to get out of, or away from, the usual working environment and discuss things in a different, more relaxed setting without the usual distractions. Whilst some people may cringe at
the thought of a ‘team away-day’, they serve a very useful purpose in helping develop the team’s shared mental model. The time spent together allows us to learn more about each other’s strengths, weaknesses, preferences, past experiences, and so on.

**Team enjoyment and positive emotions**

The fourth resource to enhance resilience in teams is team enjoyment and positive emotions. Teams that are enthusiastic, optimistic, satisfied, and relaxed have been found to be more resilient. Teams that collectively, not just individually, experience positive feelings together are increasingly motivated to deal with adversity. Staying positive together helps teams to believe that they have the ability to deal with any challenges they may face. Experiencing positive emotions as a group is also a great way to release tension and can bring team members closer together during tough times. One way to do this is by subtly blending humor with some confidence-building history; celebrate and encourage members to laugh about a time in the recent past when the team faced adversity and came through it. To further stimulate team enjoyment and positive emotions, consider some of the strategies outlined in Table 3.

**Concluding remarks**

As a final thought, it is important to note that the effectiveness of developing individual and team resilience depends on the breadth and depth of commitment from all layers of, and personnel within, an organization (e.g., the executive board, managerial committees, technical and support staff, coaches, athletes, and parents). Indeed, our impact evaluation findings suggest that elite sport teams and organizations who “buy-in” to the development of resilience see it as a genuine initiative for sustained positive change and make formal changes to policy and strategy rather than see the development of resilience as a bureaucratic “tick-box” exercise. This was the attitude taken by the U.S. Army who developed the Comprehensive Soldier Fitness (CSF) programme, an effective strategic initiative to develop resilience in soldiers, family members, and Army civilians. The programme received total and unequivocal commitment from the top of the organization and full support from Department of Defence leaders, members of Congress, and a budget to match. Thus, the best way to ensure long-lasting transformation is to make resilience development a critical part of a culture change strategy over a period of time. Indeed, General Casey – the person responsible for implementing CSF – stated that “like our physical fitness, I believe that psychological
resilience development can become not just something we in the Army “do,” but rather a critical component of our culture that will be integrated throughout our community to develop better soldiers” (Casey, 2011, p. 2). Although changing policies and organizational practices is much more challenging than working at the individual and team level in terms of developing resilience (Fasey et al., 2021), it is a vital step for sport psychology practitioners if, as a discipline, we are to improve and maintain the success and wellbeing of elite athletes and teams (Sarkar, 2018).

Note

1. To evaluate the impact of our resilience research, following institutional ethics approval, feedback was sought from coaches, support staff (e.g., sport psychology practitioners), and technical directors via an online survey (n = 50) and interviews (n = 11). Quantitative analysis of the online survey revealed that 68% of participants indicated that sport psychology practitioners have used the resilience research with coaches and/or players, and 19% of participants indicated that teams/organizations have made changes to policy and/or organizational values as a result of the resilience research. Qualitative analysis of the interviews identified five key themes: enhanced clarity and communication of what resilience is and is not, continued education and raised awareness of how to enhance resilience, refinement of personal and collective resilience qualities, creation of an environment that fosters resilience, and formal changes to policy, strategy, and the psychological curriculum to support the development of resilience.

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References


