

driven ORIGINAL RESEARCH

2025 RFA

Resilience First Aid: Primary prevention through a strength-based peer support programme.

Published: **January 2025**

Available Online: **driv.ai/rfa25**

How to cite this article: Rossouw, J.G., & Ruberto, M. (2025). Resilience First Aid: Primary prevention through a strength-based peer support programme. *Journal of Applied Neurosciences*, 4(1), a17. <https://doi.org/10.4102/jan.v4i1.17>



driven
heliodriven.com



KEY TAKEAWAYS

This peer reviewed study published in the Journal of Applied Neurosciences highlights the pressing need for proactive mental health strategies broadly in professional contexts, as well as in high-stress professions like healthcare and emergency services. Traditional mental health interventions often focus on reactive measures, addressing issues only after they manifest. The Resilience First Aid (RFA) program offers a strength-based, preventative approach to resilience and peer support, leveraging the Predictive 6 Factor Resilience (PR6) model and the ALL Protocol. By integrating neurobiological and psychotherapeutic principles, RFA aims to build personal and community resilience while addressing gaps in existing mental health support systems.

1. Innovative Framework for Resilience and Peer Support - RFA combines the Predictive 6 Factor Resilience (PR6) model's measurable and modifiable domains (Composure, Collaboration, Vision, Reasoning, Health, and Tenacity) with the neuroscience-informed ALL Protocol (Appreciate, Listen, and Lift). The PR6 model provides a comprehensive framework for understanding and enhancing resilience, while the ALL Protocol offers a structured conversational tool designed to foster emotional regulation, empathy, and proactive problem-solving. Together, these tools enable participants to address mental health challenges systematically, providing both theoretical and practical strategies for effective peer support and resilience-building.

2. Proactive and Scalable Impact - Designed for broad application and additionally for high-stress environments like healthcare and emergency services, RFA's proactive approach addresses mental health challenges before they escalate into crises. The program's structured design and integration with neurobiological insights make it adaptable to various organizational contexts. Accreditation by Suicide Prevention Australia and the American Academy for Continuing Medical Education further validates RFA's credibility and underscores its potential to set new standards in mental health support, offering a scalable, evidence-based solution for enhancing workforce sustainability and resilience.

3. Focus on Peer Support Sustainability - RFA includes a unique self-care component for peer supporters, emphasizing the importance of maintaining their own mental health while supporting others. The "Anchor" strategy equips peer supporters with tools to regulate their emotions and sustain their resilience, ensuring that they can provide effective and long-term support. This addresses a critical gap in traditional peer support programs, which often overlook the well-being of the supporters themselves.

CONCLUSION

The Resilience First Aid program represents a transformative shift in mental health support, moving from reactive interventions to proactive, strength-based strategies. Its integration of neuroscience, psychotherapeutic principles, and practical frameworks addresses critical gaps in peer support and resilience-building. By equipping individuals and organizations with tools to mitigate mental health risks like burnout, PTSD, and suicide, RFA offers a scalable solution for enhancing public health outcomes and workforce sustainability.

Explore Resilience First Aid - driv.ai/rfa

Crisis Support:

Australia - Lifeline: 13 11 14

United States - Lifeline: 988



Resilience first aid: Primary prevention through a strength-based peer support programme



Authors:

Jurie G. Rossouw¹ 
Maria Ruberto² 

Affiliations:

¹Hello Driven Pty, Ltd, Sydney, Australia

²Salutegenics Psychology, Sydney, Australia

Corresponding author:

Jurie Rossouw,
j@helloworldriven.com

Dates:

Received: 17 Oct. 2024

Accepted: 02 Dec. 2024

Published: 17 Jan. 2025

How to cite this article:

Rossouw, J.G., & Ruberto, M. (2025). Resilience first aid: Primary prevention through a strength-based peer support programme. *Journal of Applied Neurosciences*, 4(1), a17. <https://doi.org/10.4102/jan.v4i1.17>

Copyright:

© 2025. The Authors.
Licensee: AOSIS. This work is licensed under the Creative Commons Attribution License.

Orientation: Peer support and resilience are crucial for mental health, particularly in high-stress occupations such as healthcare and emergency services. Existing interventions primarily focus on reactive measures, leaving a gap in proactive mental health strategies.

Research purpose: This study aimed to investigate the effectiveness of the Resilience First Aid (RFA) programme, incorporating the Predictive 6 Factor Resilience (PR6) model and the ALL Protocol, in enhancing resilience and peer support.

Motivation for the study: There is a pressing need for primary prevention strategies to address the growing mental health challenges in high-stress professions. These challenges include burnout, post-traumatic stress disorder (PTSD), and suicide, among others. This study addresses the knowledge gap by exploring a strength-based, proactive approach to peer support.

Research approach/design and method: A literature review was conducted to examine gaps in peer support and explore the theoretical framework of RFA. The study draws on neurobiological insights and integrates psychotherapeutic principles to develop a resilience-focused intervention.

Main findings: Resilience First Aid training significantly improved participants' personal resilience, peer support skills and ability to recognise suicide risk factors. The ALL Protocol facilitated emotional regulation and constructive problem-solving in peer support interactions, aligning with neuroscience-based insights.

Implications for practice: Implementing RFA in high-stress environments could enhance workforce resilience and reduce the prevalence of acute mental health crises. The programme's structured, proactive approach addresses current gaps in mental health support systems.

Contribution/value-add: This study contributes by presenting a comprehensive, proactive model for peer support and resilience, offering a structured conversational tool (ALL Protocol) that can be applied across various professional settings.

Keywords: resilience; peer support; mental health; emergency services; healthcare; burnout; PTSD; suicide prevention.

Introduction

The importance of peer support and resilience in mental health cannot be overstated, especially in high-stress professions such as emergency services and healthcare. With growing evidence of the detrimental mental health outcomes faced by individuals in these fields, there is an urgent need for primary preventative measures that address these challenges proactively (Sher, 2019; Xinlu et al., 2022).

Peer support can be defined as the connection between people with shared lived experiences (Reidy, 2024). Peer support initiatives, when properly implemented, can act as a critical buffer against stress, trauma and burnout, providing a 'crowd-sourced' approach to support resilience, empathy and a sense of belonging among professionals (Fallon et al., 2023). With the cost of suicide estimated at \$510 billion yearly, the need for effective programmes remains a significant issue (Peterson et al., 2024).

Current mental health interventions in these sectors often focus on reactive measures, addressing issues such as burnout and trauma only after they have manifested, with \$282bn focused on mental health services, and a fraction aimed at primary prevention (Abramson et al., 2024; NIH FY 2023 Budget, 2024). This approach, while necessary, leaves a gap in preventative strategies

Read online:



Scan this QR code with your smart phone or mobile device to read online.

that could mitigate the onset of such conditions in the first place, despite growing evidence of cost-efficacy of prevention (Khanh-Dao Le et al., 2021).

The research presented in this article aims to highlight the role of peer support, resilience and proactive intervention models like Resilience First Aid (RFA) as vital components in shifting towards a preventative paradigm. The RFA framework discussed in this article is the intellectual property of Hello Driven and forms the foundation of this investigation. Through neurobiological insights and practical frameworks such as the ALL Protocol, we can enhance both the well-being and sustainability of critical workforces, ultimately contributing to broader public health outcomes.

This need is evident, as emergency service workers such as police, firefighters and emergency medical staff have a post-traumatic stress disorder (PTSD) prevalence rate of 9.8%, among $n = 248324$ workers from 34 different countries (Martínez & Blanch, 2024).

Physician suicide rates remain high across 20 countries, with male and female physicians having an 81% and 76% higher risk of suicide, respectively, compared to other occupations (Zimmermann et al., 2024).

A broad study of physicians ($n = 18719$) found that 32.6% indicated a moderate or high intention to leave within 2 years, primarily because of factors that can be mitigated through resilience and peer support interventions (Ligibel et al., 2023; Simms et al., 2023).

Peer support programmes are shown to bridge mental health service usage, increase hope, normalise experiences and decrease stigma (Agarwal et al., 2019; Fallon et al., 2023). Resilience interventions are shown to have significant effects on reducing emotional vulnerability, mitigating depression and anxiety symptoms, as well as improving prosocial behaviour and personal efficacy (Rossouw, 2024; Ungar & Theron, 2020).

Peer support gaps

Various gaps have been identified in occupational fields.

Nurses

A recent systematic review identified a significant gap in the integration and prioritisation of peer support within transition-to-practice programmes for novice nurses (Melissant et al., 2024). While peer support was present in some interventions, it was inconsistently applied, suggesting a lack of systematic implementation. This gap is notable given the documented role of peer support in fostering social development, mitigating stress, and enhancing retention through increased sense of belonging and job satisfaction (Fröglé et al., 2020; Godfrey & Scott, 2020; Stacey et al., 2020). The findings indicate that existing programmes may insufficiently leverage peer support, which is essential for

supporting adaptation to professional roles and promoting workforce sustainability.

Physicians

The incidence of stress and burnout in physicians not only contributes to preventable medical errors, intent to leave but also increased rates of physician suicide (LeClaire et al., 2022; Petrie et al., 2020; Yates, 2020). Gaps identified include a lack of clarity around the peer specialist role, insufficient provider buy-in and inadequate integration support, which hinder effective deployment of peer support in primary care settings (Doulias et al., 2021; Peeples et al., 2023).

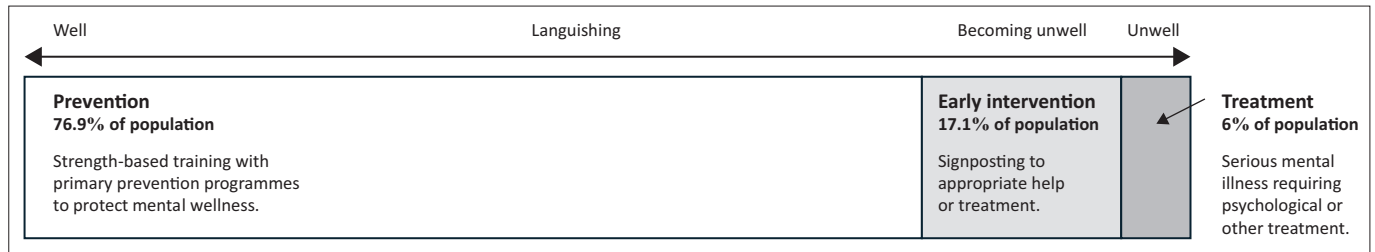
Emergency responders

A systematic review of peer support in emergency services has highlighted several critical gaps in the accessibility and implementation of peer support for first responders (Donovan, 2022). Key issues include the inconsistent differentiation between trained peer support and informal colleague interactions, limited integration of organisational backing and a lack of clarity regarding standardised peer support roles. These gaps are compounded by variations in programme implementation across organisations and insufficient support for peer supporters, increasing their risk of burnout. Despite the significant role of peer support in enhancing coping skills, processing traumatic experiences and promoting post-traumatic growth, emergency services often face challenges in providing consistent, structured and comprehensive peer support, ultimately affecting the well-being and resilience of first responders (Feuer, 2021).

These gaps indicate the need for a structured peer support programme that can be consistently applied, clarifying interaction methodology and protecting peer supporters' mental health. Traditional mental health interventions in high-stress professions are predominantly reactive, focusing on addressing issues only after they have manifested. There is an identified need for structured peer support that incorporates resilience training, such as RFA, to bridge the gap in primary preventative measures and provide consistent, effective support to those at risk of mental health challenges.

Currently, 26.1% of the population experiences some form of mental illness, ranging from mild to severe impairment, with 6% experiencing serious mental illness (NIMH, 2024). When mapped across a continuum of mental health, 6% require treatment, while 17.1% could benefit from early intervention. This leaves 76.9% of individuals in the 'well' category, representing a substantial opportunity for implementing primary prevention initiatives that could significantly enhance cost-effective population mental health outcomes (Figure 1).

This article sets out a theoretical framework for RFA as a proactive and strength-based programme, utilising the ALL Protocol to clarify conversational interaction methodology and self-management through peer support interactions.



Note: Size of boxes indicate relative number of people in each category, ranging from Well (Prevention – 76.9%), to Becoming Unwell (Early Intervention – 17.1%), through to Unwell (Treatment – 6%).

FIGURE 1: Prevention in the mental health continuum.

Study design

Data gathering method

This study involved a literature review in two phases. The first phase identifies challenges in peer support and highlights the importance of preventative programmes and resilience, concluding with the shortcomings and gaps. The second phase provides a description of the RFA programme.

To consolidate integrated theories, scholarly publications by seminal authors were consulted, supplemented by e-journals from databases such as EBSCOHost, Emerald, Google Scholar, ProQuest and Science Direct. Data were also gathered from reference lists of the identified publications.

Inclusion and exclusion criteria ensured the retrieval of relevant data. This involved reviewing book tables of contents and abstracts of peer-reviewed articles in English, with no time frame limitation, but prioritising recent work. Keywords included 'resilience', 'peer support', 'emergency services', 'healthcare' and 'PTSD'. Boolean operators were used to refine search results.

Phase 1: Identification of gaps in peer support

The first phase aimed to uncover the limitations of existing peer support interventions, such as role ambiguity, insufficient integration within organisational structures and a lack of support mechanisms for peer supporters. To establish a theoretical foundation, the review also explored resilience, peer support and mental health interventions.

Meta-studies in the field of psychology were included to validate these gaps, examining the effectiveness of resilience-based interventions in reducing mental health risks such as burnout, anxiety and depression. These studies highlighted inconsistencies in programme implementation and gaps in evidence-based support, particularly in high-stress environments like healthcare and emergency services. The findings provided evidence of the need for resilience-focused interventions like RFA, underscoring the potential of structured, preventative peer support programmes to address these challenges.

Phase 2: Description of resilience first aid

The second phase focused on the conceptual and practical aspects of the RFA programme, including its integration of the Predictive 6 Factor Resilience (PR6) model and the ALL

Protocol developed for the programme. An examination of meta-studies in neuroscience was undertaken to substantiate the theoretical underpinnings of resilience. These studies explored the neurobiological mechanisms associated with resilience, such as the role of the limbic system, prefrontal cortex (PFC), and brain-derived neurotrophic factor (BDNF) in stress regulation and emotional resilience.

This phase examined the alignment of the RFA programme with established psychotherapeutic models, including process-based therapy (PBT), acceptance and commitment therapy (ACT), cognitive behavioural therapy (CBT), motivational interviewing (MI) and compassion focused therapy (CFT). Furthermore, the review detailed the practical strategies embedded within RFA to address the gaps identified in Phase 1. Emphasis was placed on how the programme could enhance peer support capabilities, mitigate mental health risks and proactively improve resilience outcomes in high-stress occupational settings.

Resilience First Aid builds on the PR6 model as a comprehensive mind-body approach to enable primary prevention (Rossouw & Rossouw, 2016; Rossouw et al., 2017). The PR6 model indicates significant protective effects of resilience at a measurement of 0.85 as measured on the PR6 scale, providing a 5.9-fold risk reduction of psychological vulnerability, 5.6- and 4.2-fold reduced appearance of depression and anxiety symptoms (Rossouw, 2024).

Given the modifiability of resilience factors through targeted training, this provides a basis for participants to enhance personal resilience capacity and how to apply this knowledge in a peer support setting through additional training. Therefore, a community-focused programme aimed at strengthening resilience through a flexible, conversational approach was explored.

Resilience First Aid provides conversational training through the ALL Protocol – 'Appreciate', 'Listen' and 'Lift'. ALL is a conversational framework designed to facilitate proactive discussions about mental health and resilience. It encourages individuals to appreciate others, engage in active listening and uplift each other, building well-being, stronger relationships and resilience.

The ALL Protocol integrates concepts from several established psychological models. Process-based therapy

combines elements from diverse therapeutic modalities, mirroring RFA's goal of addressing the processes underlying psychological distress (Hofmann & Hayes, 2019). Acceptance and commitment therapy fosters acceptance and psychological flexibility, supporting RFA's approach to proactive mental health (Hayes et al., 2011). Motivational interviewing aligns with the ALL Protocol's focus on empathetic communication and strength-based conversations (Hettema et al., 2005). Compassion focused therapy aligns with RFA's proactive resilience-building approach by fostering emotional regulation, empathy and self-care, complementing its neuroscience-based peer support framework (Craig et al., 2020; Gilbert, 2009). Cognitive behavioural therapy emphasises modifying maladaptive thoughts, highlighting the importance of cognitive factors in resilience (Butler et al., 2005).

By integrating these psychotherapeutic principles, RFA provides a comprehensive approach to enhancing mental health, proactively building resilience and supporting community well-being through peer support skills.

Findings

The RFA programme differs from traditional mental health interventions by offering a structured, proactive and strength-based approach to resilience-building. Unlike other peer support programmes, which often focus on reactive responses to mental health crises, RFA is explicitly designed for primary prevention, targeting mental health challenges before they escalate.

What sets RFA apart is its integration of the PR6 model, which quantifies and addresses key domains of resilience (composure, collaboration, vision, reasoning, health and tenacity) through measurable and modifiable factors. This model ensures that training is both evidence-based and targeted at specific resilience-building strategies. Additionally, the ALL Protocol ('Appreciate', 'Listen' and 'Lift') offers a neuroscience-informed conversational framework that equips participants with tools to engage in meaningful, strength-focused discussions. Unlike generic active listening frameworks, the ALL Protocol integrates insights from neuroscience, such as the roles of the limbic system and PFC in emotional regulation and problem-solving.

The RFA programme also incorporates neurobiological principles into its curriculum, offering participants practical strategies for emotional regulation (e.g. limbic downregulation) and resilience-building through small, frequent adjustments to mental habits. For example, the training teaches participants to recognise signs of high or low resilience and respond with tailored conversational techniques, promoting a culture of proactive peer support that is grounded in biological and psychological science.

Another distinguishing feature is the dual emphasis on individual resilience-building and community well-being. Participants not only develop personal resilience skills but

are also trained to apply these skills in peer support interactions, creating a ripple effect of improved mental health within workplaces and communities. Resilience First Aid includes a self-care and sustainability component ('Anchor'), which ensures that peer supporters maintain their mental well-being while providing support to others, a critical gap often overlooked in other programmes.

Delivered over 2 days (14 h), the programme provides a comprehensive toolkit that includes workshop materials, an RFA Responder Kit, and ongoing access to the Driven Resilience App, which offers continuous resources and tracking for resilience development. Unlike other interventions, which may lack ongoing support mechanisms, this integration ensures sustained benefits and adaptability to participants' evolving needs.

Finally, the RFA programme is accredited by Suicide Prevention Australia, reflecting its rigorous adherence to safety and quality standards. This level of accreditation further differentiates RFA from unstructured or less formal peer support programmes.

Resilience First Aid programme structure

Resilience First Aid is structured around eight modules, incorporating neuroscience elements to build resilience and peer support skills through understanding and practical application (Rossouw & Ruberto, 2024). Following is a summary of each module, emphasising the relevant neurological underpinnings:

1. Primer: This introductory module explains resilience and its role in preventing mental illness. Participants learn about the PR6 model and the ALL Protocol, which offers a conversational tool for resilience-building. The module introduces the regulation of the limbic brain and PFC, key to managing emotions and executive functions (Rossouw et al., 2024).

2. Composure: Focusing on emotional regulation, this module explores the neuroscience of stress responses, particularly the limbic brain's fight-or-flight mechanism (Iwakabe et al., 2023). Participants learn practical reappraisal skills for managing stress, alongside trauma-informed care models (Uusberg et al., 2019). Neurobiologically, the module highlights the role of the insula and Hypothalamic–Pituitary–Adrenal (HPA) axis in emotional regulation and the preBötzinger complex in controlling breathing, which aids in maintaining composure under pressure (Li et al., 2021; Yackle, 2023).

3. Collaboration: This module emphasises the importance of social connections and peer support. It delves into the neuroscience of social bonding and coregulation (Siegel, 2012), involving the orbitofrontal cortex and fusiform gyrus, which are critical for recognising social cues and building relationships. Participants are provided with practical communication strategies to strengthen social bonds (Oesch, 2024).

4. Vision: Vision focuses on helping participants understand the role of purpose and meaning in life (Jonah et al., 2021). The neuroscience underpinning this module involves the hippocampus for memory and goal-setting, the PFC for executive planning and the ventral striatum, which is associated with motivation and reward processing (Holz et al., 2020).

5. Reasoning: This module teaches cognitive resilience through critical thinking and planning skills, underpinned by the PFC and anterior cingulate cortex (Domic-Siede et al., 2020). These areas are responsible for decision-making, adaptability and problem-solving. The module provides practical strategies for recognising reasoning abilities in others and fostering resourcefulness (Fazey, 2010).

6. Health: Health covers the connection between physical well-being and resilience, with a focus on neuroplasticity facilitated by BDNF (Leal et al., 2015). The hippocampus plays a central role in this process, linking healthy habits such as nutrition and exercise to improved mental and emotional resilience (Cassilhas et al., 2012).

7. Tenacity: Tenacity addresses perseverance and self-motivation, teaching realistic optimism and time management (De Meza & Dawson, 2021). The PFC plays a key role in regulating stress through its influence on the HPA axis, supporting the ability to persist and recover from setbacks (Arnsten, 2009).

8. Closing: The final module reviews key concepts from the programme and reinforces the skills learned. Participants develop a personal resilience action plan and complete an assessment to cement their understanding of the material.

Each module integrates neuroscience-based insights, giving participants a comprehensive framework to build resilience in themselves and others.

The Appreciate, Listen, and Lift (ALL) Protocol

The ALL Protocol is a dynamic, neuroscience-informed conversational tool designed to foster resilience and enhance emotional support through everyday interactions. It consists of three interconnected actions – ‘Appreciate’, ‘Listen’, and ‘Lift’ – which guide the flow of conversations. These actions are flexible, allowing for a natural back-and-forth progression, and incorporate an understanding of brain function to better support the mental and emotional state of both parties.

‘Appreciate’ is an ongoing action focused on internal awareness, awareness of the other person and the current environment (appropriateness of location and timing to engage in conversation). This step is informed by an understanding of the neural patterns and brain states that underlie behaviour and emotions. When engaging in a conversation, it is important to first regulate personal limbic brain activation (emotional centre) to stay grounded and calm (Wheeler et al., 2017). This enables maintenance of a stable mental state and to respond effectively (Meisner et al., 2022).

‘Appreciate’ also involves observing the other person’s mental state. Where signs of high limbic brain activation are observed (such as stress, fear or anger), the peer supporter can adjust their approach to hold space of safety and calmness. Alternatively, if greater PFC activation is observed (e.g. showing signs of positive affect, clear thinking, problem-solving), the peer supporter is able to take a more direct, proactive approach. The skill is to be able to notice what type of connection might be more effective in the moment – whether the person might benefit from limbic brain downregulation or higher order conversation.

Key actions during ‘Appreciate’ include:

- Observing verbal and nonverbal cues to assess the person’s emotional and mental state.
- Regulating internal emotional state through self-awareness to anchor through in the conversation.
- Being mindful of strengths, challenges, and contextual factors to guide the conversation appropriately.

‘Listen’ is at the core of coregulation and involves connecting with the other person to help stabilise their emotional state (Siegel, 2012). Neuroscience shows that during heightened limbic brain activity, logical reasoning and decision-making (which depend on the PFC) are harder to access (Girotti et al., 2018; Luethi et al., 2008). ‘Listen’ aims to calm the emotional centre and activate higher order thinking by using structured, empathetic questions and allowing enough time for the other person to feel understood (Shin et al., 2005).

When someone is experiencing strong limbic brain activation (e.g. stress or fear), research indicates value in not asking abstract ‘why’ questions, which could further activate the emotional brain. Instead, focusing on factual and specific questions (e.g. how, what, where) helps engage the PFC (White & Wild, 2016). This step encourages coregulation, where a calm and empathetic demeanour helps the other person move towards a more regulated state. Listening involves taking time, pausing, asking follow-up questions and using active listening techniques like reflecting and clarifying to ensure the person feels heard and understood.

Key actions during ‘Listen’ include:

- Asking factual, grounded questions to engage the PFC and reduce limbic brain activation.
- Reflecting and clarifying responses to show understanding, which helps downregulate emotional intensity.
- Avoiding premature solutions, as lingering emotional activation may interfere with problem-solving if addressed too early.
- Taking pauses and using nonverbal cues (eye contact, nodding) to create a safe, nonjudgemental space.

‘Lift’ becomes possible when PFC activity is more engaged, often following effective implementation of ‘Appreciate’ and ‘Listen’. At this stage, limbic brain downregulation allows for clearer thinking and openness to new ideas (Gangopadhyay

et al., 2021; Girotti et al., 2018). 'Lift' encourages curiosity, exploration and forward-thinking, facilitating problem-solving and hopefulness (Juliyanto et al., 2021).

When the person is ready, 'Lift' involves offering appropriate encouragement and guidance based on their mental state. This might involve helping them set achievable goals, offering strategies for overcoming challenges, or simply affirming their strengths and progress. The neuroscience behind this action suggests that once emotional regulation is in place, engaging the whole brain – from the PFC for logical thinking to the ventral striatum for motivation – enables the person to take proactive steps towards growth and resilience (Feng et al., 2021).

Key actions during 'Lift' include:

- Offering practical suggestions, space for reflection or guidance once the person is calm and thinking more clearly.
- Encouraging forward action, such as setting small, manageable goals to build momentum.
- Using positive, supportive language that works towards empowerment and resilience, sparking curiosity and motivation.

Neural interaction overview of ALL

The ALL Protocol is deeply connected to brain function. 'Appreciate' (A) centres around recognising whether the person is operating more from the limbic brain (emotional, reactive) or the PFC (logical, thoughtful), which helps guide your approach. 'Listen' (L) serves as a tool for coregulation, aiming to reduce limbic activation through empathetic, grounded questioning, allowing the person to regain emotional balance. Finally, 'Lift' (L) capitalises on a shift towards PFC engagement, promoting curiosity and constructive problem-solving (Feng et al., 2021; Juliyanto et al., 2021).

By understanding the neural states underlying emotions and behaviours, the ALL Protocol provides a framework to better navigate conversations, whether the goal is emotional support or proactive resilience-building. This model ensures both parties remain emotionally secure and fosters meaningful, supportive interactions.

Anchor as a self-management strategy

The concept of Anchor is a self-management component of the ALL Protocol, aimed at improving personal sustainability in providing peer support, which is important given the previously identified peer support gaps (Donovan, 2022). It emphasises self-regulation and self-care to maintain mental stability during supportive interactions.

Anchoring allows individuals to maintain neural balance, particularly in challenging or emotional conversations, by helping them remain composed and in control through activation of PR6 resilience skills and conversational mindfulness as part of the training. This process of self-

regulation is essential in both formal support roles, such as in RFA, and in everyday interactions.

Anchoring is closely linked to the development of resilience, particularly the PR6 resilience domains: composure, collaboration, vision, reasoning, health and tenacity. The process involves continuous self-check-ins to maintain clarity and avoid emotional overwhelm. This strategy allows individuals to stay grounded, making it possible to engage effectively without being swept up in the emotional tides of difficult conversations. Additionally, recognising when certain conversations consistently lower one's mental state can provide valuable insights for future preparation.

Anchoring is conceptualised as building and maintaining a 'resilience chain', analogous to a ship's anchor chain. Each link in the chain represents a resilience skill, strengthened through continuous practice across the six resilience domains (Rossouw et al., 2019). This proactive development of resilience skills ensures that individuals are prepared to face challenging situations, maintaining stability and effectiveness.

An initial evaluation of RFA indicated improvements in both personal resilience and peer support skills among participants. Including increased resilience and peer support skills (Rossouw & Ruberto, 2024): participants experienced a 10.2% increase in personal resilience and an 11.3% increase in peer support skills, sustained over a 4-week follow-up. Improvements were especially noted in interpersonal skills (21.9%), composure (17.2%) and tenacity (14.7%). Enhanced suicide prevention abilities: the ability to recognise suicide warning signs improved by 33.3%, indicating that RFA can be a vital tool in suicide prevention. Stigma reduction: participants showed a 9.0% improvement in identifying and reducing mental health stigma.

The study concludes that RFA holds promise as a proactive approach to enhancing personal resilience, peer support and suicide prevention capabilities. Further research involving larger and more diverse groups is suggested to explore scalability and long-term impacts (Rossouw & Ruberto, 2024).

Discussion

The findings from this study suggest that the RFA programme and the ALL Protocol offer a comprehensive and proactive framework for building resilience and enhancing mental health support within high-stress occupations. By integrating the PR6 model with principles from established psychotherapeutic approaches, the RFA programme provides participants with the knowledge and practical skills needed to engage in effective peer support, emphasising primary prevention rather than reactive intervention.

Compared to other peer support or resilience-building initiatives, RFA stands out because of its emphasis on measurable resilience enhancement, proactive intervention and integration of neurobiological insights. Most peer

support programmes rely on general frameworks for emotional support and are reactive, addressing mental health challenges only after they manifest. Resilience First Aid, by contrast, provides a systematic approach that aligns neuroscience, psychology and practical application to build both personal and collective resilience in high-stress environments.

By explicitly focusing on the modifiability of resilience factors through the PR6 model, RFA addresses gaps in traditional interventions that fail to operationalise resilience in actionable terms. The ALL Protocol, with its neuroscience-informed conversational flow, adds an innovative dimension to peer support by enabling participants to navigate conversations based on real-time emotional states, ensuring that interactions are both supportive and constructive.

The evidence presented highlights the importance of structured peer support systems in addressing the mental health needs of professionals in high-stress environments. The prevalence of PTSD among emergency responders and the high rates of burnout and intent to leave among healthcare workers underscore the urgent need for interventions that can mitigate these risks before they lead to acute mental health crises (Martínez & Blanch, 2024; Yates, 2020). The RFA approach, with its focus on early identification of mental health challenges and proactive resilience-building, aims to fill this gap by providing both peer supporters and recipients with the tools necessary to effectively manage stress, trauma and other mental health concerns.

Integrating the ALL Protocol into RFA further strengthens its utility by providing a clear, neuroscience-informed conversational framework that enhances the quality of support interactions. The three interconnected actions of 'Appreciate', 'Listen' and 'Lift' facilitate emotional regulation, empathy and empowerment, helping individuals move from a state of distress to one of constructive problem-solving. This aligns with established models of coregulation and coactive coping, which emphasise the role of social support in regulating the autonomic nervous system and fostering psychological well-being (Feng et al., 2021; Gangopadhyay et al., 2021).

The Anchor component of RFA addresses an often overlooked aspect of peer support – the need for self-care among supporters. Ensuring that peer supporters are emotionally anchored and capable of maintaining their resilience is crucial for preventing burnout and sustaining the quality of support provided. The anchoring process, guided by self-awareness and regular emotional check-ins, allows supporters to remain effective while safeguarding their mental health.

The improvements observed in participants' resilience, peer support skills, and ability to recognise suicide risk factors provide initial evidence of RFA's effectiveness (Rossouw & Ruberto, 2024). The significant increases in composure, interpersonal skills and tenacity indicate the programme's

potential to foster resilience at the individual level and within broader organisational settings. This suggests that RFA could be effectively implemented across diverse environments, including workplaces, healthcare settings and emergency services, as a means to develop a resilient workforce.

While these findings are promising, further research is needed to assess the long-term impact of RFA and its scalability across different populations. Future studies could explore the sustained effects of RFA training over time and its applicability in various cultural contexts. Additionally, research on the neurobiological changes associated with RFA participation could provide deeper insights into the mechanisms underlying its effectiveness.

Overall, the RFA programme, incorporating the ALL Protocol and guided by the PR6 model, represents a significant advancement in the field of primary prevention for mental health. Its emphasis on proactive resilience-building, coupled with a structured approach to peer support, has the potential to address the growing mental health challenges faced by individuals in high-stress occupations, ultimately contributing to enhanced public health outcomes.

Conclusion

The findings of this study underscore the significance of the RFA programme as an innovative, proactive approach to building resilience and enhancing peer support in high-stress professions. By integrating the PR6 model with the ALL Protocol, RFA provides participants with the tools to engage in meaningful, strength-based conversations that promote emotional regulation, problem-solving, and well-being. The programme's potential to mitigate mental health risks such as burnout, PTSD and suicide is particularly relevant for professions such as healthcare and emergency services, where the mental health burden is notably high. These results suggest that the RFA approach can play a crucial role in shifting mental health interventions from reactive to preventative strategies, improving both individual and organisational resilience.

Implications for practice

The study suggests that implementing RFA within organisations could lead to a more resilient workforce, particularly in high-stress settings. The training equips individuals with practical skills to manage stress, support colleagues and recognise early signs of mental health challenges. Additionally, the ALL Protocol provides a structured conversational framework that enhances peer support interactions, making it a valuable tool for promoting mental well-being across various sectors. Integrating RFA into existing mental health programmes or as a stand-alone intervention could reduce the incidence of acute mental health crises and improve long-term workforce sustainability.

Limitations and recommendations

While this study provides promising insights, it is limited by its scope and sample size. Further research is required to

explore the long-term effects of RFA training, particularly in diverse cultural and organisational contexts. Future studies should focus on the programme's scalability, assessing its effectiveness across different populations and professions. Additionally, exploring the neurobiological mechanisms behind the programme's impact could offer valuable insights into the underlying processes driving resilience and mental health improvement. This would enable a more comprehensive understanding of how RFA interventions contribute to mental well-being at individual and systemic levels.

Acknowledgements

Competing interests

The lead author, J.G.R., is an employee of Hello Driven. As such, Hello Driven could potentially benefit from the research findings through further development and implementation of the programme being studied. Regardless of this affiliation, the author affirms their commitment to the strictest scientific and ethical standards in conducting the research. All data analysis and interpretations have been conducted impartially and independently.

Authors' contributions

All authors have significantly contributed to the research project and preparation of the article. J.G.R., as the lead author, developed the outline, methodology and overall structure of the research project. J.G.R. was responsible for the initial literature research, creating visualisations, compiling the final draft and managing the research project as a whole.

M.R. acted as a reviewer, providing insights, constructive critique, and supervision for the research project. M.R.'s expertise helped refine the study and contribute to the completion of the final draft.

Each author has approved the final version of the manuscript for submission and agreed to be accountable for all aspects of the work.

Ethical considerations

This article does not contain any studies involving human participants performed by any of the authors.

Funding information

This research was conducted as part of the ongoing work by the lead author J.G.R. in his capacity as an employee at Hello Driven. There were no specific grants or other external funding sources from any funding agency in the public, commercial, or not-for-profit sectors. All resources and funding necessary for the completion of the research were provided by Hello Driven.

Data availability

The authors confirm that the data supporting the findings of this study are available within the article.

Disclaimer

The views and opinions expressed in this article are those of the authors and are the product of professional research. It does not necessarily reflect the official policy or position of any affiliated institution, funder, agency or that of the publisher. The authors are responsible for this article's results, findings and content.

References

- Abramson, B., Boerma, J., & Tsyvinski, A. (2024). Macroeconomics of mental health. *National Bureau of Economic Research*. Retrieved from https://boazabramson.github.io/assets/macro_mental.pdf
- Agarwal, B., Brooks, S.K., & Greenberg, N. (2019). The role of peer support in managing occupational stress: A qualitative study of the sustaining resilience at work intervention. *Workplace Health & Safety*. <https://doi.org/10.1177/2165079919873934>
- AHWH. (2024, March 23). *Deaths by suicide over time*. Retrieved from <https://www.aihw.gov.au/suicide-self-harm-monitoring/data/deaths-by-suicide-in-australia/suicide-deaths-over-time>
- Arnstén, A.F. (2009). Stress signalling pathways that impair prefrontal cortex structure and function. *Nature Reviews Neuroscience*. <https://doi.org/10.1038/nrn2648>
- Butler, A.C., Chapman, J.E., Forman, E.M., & Beck, A.T. (2005). The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review*. <https://doi.org/10.1016/j.cpr.2005.07.003>
- Cassilhas, R., Lee, K., Fernandes, J., Oliveira, M., Tufik, S., Meeusen, R., & De Mello, M. (2012). Spatial memory is improved by aerobic and resistance exercise through divergent molecular mechanisms. *Neuroscience*. <https://doi.org/10.1016/j.neuroscience.2011.11.029>
- CDC. (2024, March 23). *Fatal injury trends*. Retrieved from <https://www.cdc.gov/injury/wisqars/fatal/trends.html>
- Champine, R.B., Hoffman, E.E., & Matlin, S.L. (2022). 'What does it mean to be trauma-informed?': A mixed-methods study of a trauma-informed community initiative. *Journal of Child and Family Studies*. <https://doi.org/10.1007/s10826-021-02195-9>
- Craig, C., Hiskey, S., & Spector, A. (2020). Compassion focused therapy: A systematic review of its effectiveness and acceptability in clinical populations. *Expert Review of Neurotherapeutics*. <https://doi.org/10.1080/14737175.2020.1746184>
- De Meza, D., & Dawson, C. (2021). Neither an optimist nor a pessimist be: Mistaken expectations lower well-being. *Personality and Social Psychology Bulletin*. <https://doi.org/10.1177/0146167220934577>
- Domic-Siede, M., Irani, M., Valdés, J., Perrone-Bertolotti, M., & Ossandón, T. (2020). Theta activity from frontopolar cortex, mid-cingulate cortex and anterior cingulate cortex shows different roles in cognitive planning performance. *NeuroImage*. <https://doi.org/10.1016/j.neuroimage.2020.117557>
- Donovan, N. (2022). Peer support facilitates post-traumatic growth in first responders: A literature review. *Trauma*. <https://doi.org/10.1177/14604086221079441>
- Doulias, T., Thrikandiyur, A., Titus, N., Soundararasha, K., Coxon, A., Amarantidis, E., & Arulampalam, T. (2021). Junior doctors' wellbeing at peak and post-peak pandemic: A repeated cross-sectional study. *The Annals of The Royal College of Surgeons of England*. <https://doi.org/10.1308/rcsann.2021.0272>
- Driven. (2022, September 7). *Resilience first aid achieves full accreditation*. Retrieved from <https://home.hellodriven.com/articles/resilience-first-aid-achieves-full-accreditation/>
- Fallon, P., Jaegers, L.A., Zhang, Y., Dugan, A.G., Cherniack, M., & Ghaziri, M.E. (2023). Peer support programs to reduce organizational stress and trauma for public safety workers: A scoping review. *Workplace Health & Safety*. <https://doi.org/10.1177/21650799231194623>
- Fazey, I. (2010). Resilience and higher order thinking. *Ecology and Society*. Retrieved from <https://www.jstor.org/stable/26268183>
- Feng, W., Wang, W., Liu, J., Wang, Z., Tian, L., & Fan, L. (2021). Neural correlates of causal inferences in discourse understanding and logical problem-solving: A meta-analysis study. *Sec. Speech and Language*. <https://doi.org/10.3389/fnhum.2021.666179>
- Feuer, B.S. (2021). First responder peer support: An evidence-informed approach. *Journal of Police and Criminal Psychology*. <https://doi.org/10.1007/s11896-020-09420-z>
- Frögel, E., Rudman, A., Ljótsson, B., & Gustavsson, P. (2020). Preventing stress-related ill health among. *Worldviews on Evidence-Based Nursing*. <https://doi.org/10.1111/wvn.12442>
- Gangopadhyay, P., Chawla, M., Dal Monte, O., & Chang, S.W. (2021). Prefrontal-Amygdala circuits in social decision-making. *Nature Neuroscience*. <https://doi.org/10.1038/s41593-020-00738-9>
- Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment*. <https://doi.org/10.1192/apt.bp.107.005264>
- Gilbert, P. (2015). Affiliative and prosocial motives and emotions in mental health. *Dialogues in Clinical Neuroscience*. <https://doi.org/10.31887%2FDCNS.2015.17.4%2Fpgilbert>

- Girotti, M., Adler, S., Bulin, S., Fuchic, E., Paredes, D., & Morilak, D. (2018). Prefrontal cortex executive processes affected by stress in health and disease. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*. <https://doi.org/10.1016/j.pnpbp.2017.07.004>
- Godfrey, K., & Scott, S.D. (2020). At the heart of the pandemic: Nursing peer support. *Nurse Leader*. <https://doi.org/10.1016/j.mnl.2020.09.006>
- Hayes, S.C., Strosahl, K.D., & Wilson, K.G. (2011). *Acceptance and commitment therapy: The process and practice of mindful change*. Guilford Press.
- Hettema, J., Steele, J., & Miller, W.R. (2005). Motivational interviewing. *Annual Review of Clinical Psychology*. <https://doi.org/10.1146/annurev.clinpsy.1.102803.143833>
- Hofmann, S.G., & Hayes, S.C. (2019). The future of intervention science: Process-based therapy. *Clinical Psychological Science*. <https://doi.org/10.1177/2167702618772296>
- Holz, N.E., Tost, H., & Meyer-Lindenberg, A. (2020). Resilience and the brain: A key role for regulatory circuits linked to social stress and support. *Molecular Psychiatry*. <https://doi.org/10.1038/s41380-019-0551-9>
- Iwakabe, S., Nakamura, K., & Thomas, N.C. (2023). Enhancing emotion regulation. *Psychotherapy Research*. <https://doi.org/10.1080/10503307.2023.2183155>
- Jonah, P.F., Wong, Y.J., & McDermott, R.C. (2021). Examining Nietzsche's epigram: Having a why helps you bear almost any how? *Journal of Humanistic Psychology*. <https://doi.org/10.1177/20221678211041828>
- Juliyanto, E., Marwoto, P., Iswar, R.S., Wiyanto, Nugroho, S.E., & Mindyarto, B.N. (2021). Brain activity of problem solving process: A systematic literature review. *Journal of Physics: Conference Series*. <https://doi.org/10.1088/1742-6596/1918/5/052068>
- Khanh-Dao Le, L., Esturas, A.C., Mihalopoulos, C., Chiotelis, O., Bucholz, J., Chatterton, M., & Engel, L. (2021). Cost-effectiveness evidence of mental health prevention and promotion interventions: A systematic review of economic evaluations. *PLoS Medicine*. <https://doi.org/10.1371/journal.pmed.1003606>
- Kunselman, A.R. (2024). A brief overview of pilot studies and their sample size justification. *Fertility and Sterility*. <https://doi.org/10.1016/j.fertnstert.2024.01.040>
- Leal, G., Afonso, P.M., Salazar, I.L., & Duarte, C.B. (2015). Regulation of hippocampal synaptic plasticity by BDNF. *Brain Research*. <https://doi.org/10.1016/j.brainres.2014.10.019>
- LeClaire, M., Poplau, S., Linzer, M., Brown, R., & Sinsky, C. (2022). Compromised integrity, burnout, and intent to leave the job in critical care nurses and physicians. *Critical Care Explorations*. <https://doi.org/10.1097/CCE.0000000000000629>
- Li, W., Yang, P., Ngetich, R.K., Zhang, J., Jin, Z., & Li, L. (2021). Differential involvement of frontoparietal network and insula cortex in emotion regulation. *Neuropsychologia*. <https://doi.org/10.1016/j.neuropsychologia.2021.107991>
- Ligibel, J.A., Goularte, N., & Berliner, J.I. (2023). Well-being parameters and intention to leave current institution among academic physicians. *JAMA Netw Open*. <https://doi.org/10.1001/jamanetworkopen.2023.47894>
- Luethi, M., Meier, B., & Sandi, C. (2008). Stress effects on working memory, explicit memory, and implicit memory for neutral and emotional stimuli in healthy men. *Sec. Learning and Memory*. <https://doi.org/10.3389/neuro.08.005.2008>
- Ma, Q., Gallo, J.J., Parisi, J.M., & Joo, J. (2022). Development of the Mental Health Peer Support Questionnaire in colleges and vocational schools in Singapore. *International Journal of Mental Health Systems*. <https://doi.org/10.1186/s13033-022-00555-6>
- Martínez, A., & Blanch, A. (2024). Are rescue workers still at risk? A meta-regression analysis of the worldwide prevalence of post-traumatic stress disorder and risk factors. *Stress and Health*. <https://doi.org/10.1002/smi.3372>
- Meade, A.W., & Craig, S.B. (2012). Identifying careless responses in survey data. *Psychological Methods*. <https://doi.org/10.1037/a0028085>
- Meisner, O.C., Nair, A., & Chang, S.W. (2022). Amygdala connectivity and implications for social cognition and disorders. *Handbook of Clinical Neurology*. <https://doi.org/10.1016/B978-0-12-823493-8.00017-1>
- Melissant, H.C., Hendriks, R.R., Bakker, E.J., Kox, J.H., Rietveld, N., Miedema, H.S., Roelofs, P.D.D.M., & Verhaegh, K.J. (2024). Interventions that support novice nurses' transition into practice: A realist review. *International Journal of Nursing Studies*, 157, 104785. <https://doi.org/10.1016/j.ijnurstu.2024.104785>
- Mikulincer, M., & Shaver, P.R. (2010). *Attachment in adulthood: Structure, dynamics, and change*. Guilford Publications.
- NIH FY 2023 Budget. (2024). *National Institute of Mental Health*. Retrieved from <https://www.nimh.nih.gov/about/budget/fy-2023-budget-congressional-justification>
- NIMH. (2024). *Mental illness*. Retrieved from <https://www.nimh.nih.gov/health/statistics/mental-illness>
- Oesch, N. (2024). Social brain perspectives on the social and evolutionary neuroscience of human language. *Brain Science*. <https://doi.org/10.3390/brainsci14020166>
- Peeples, A.D., Muralidharan, A., McCarthy, S., Goldberg, R., Kuykendall, L., Vineyard, N., & Chinman, M. (2023). Barriers and enablers to implementing peer specialists in veterans health administration primary care: A qualitative study. *Journal of General Internal Medicine*. <https://doi.org/10.1007/s11606-022-07782-0>
- Peterson, C., Haileyus, T., & Stone, D.M. (2024). Economic cost of US suicide and nonfatal self-harm. *American Journal of Preventive Medicine*. <https://doi.org/10.1016/j.amepre.2024.03.002>
- Petrie, K., Crawford, J., Shand, F., & Harvey, S.B. (2020). Workplace stress, common mental disorder and suicidal ideation in junior doctors. *Internal Medicine Journal*. <https://doi.org/10.1111/imj.15124>
- Reidy, C. (2024). Peer support in chronic health conditions. *BMJ*. <https://doi.org/10.1136/bmj-2022-070443>
- Rossouw, J.G. (2023). *National resilience index: USA & Australia 2023*. Hello Driven. Retrieved from <https://driv.ai/NRI2023>
- Rossouw, J.G. (2024). Defining protective resilience: The 85% threshold for personality development and mental health risk reduction. *Education & Training PsyArxiv*. <https://doi.org/10.31234/osf.io/jkmmf>
- Rossouw, J.G., Eriau, C., & Beeson, E. (2019). Building resilience through a virtual coach called driven: Longitudinal pilot study and the neuroscience of small, frequent learning tasks. *International Journal of Neuropsychotherapy*. Retrieved from <https://driv.ai/ijnpt-2019-023-041>
- Rossouw, J.G., Herlofson, J., Geldenhuys, D.J., & Eriau, C.L. (2024). High Adversity Resilience Training (HART): Development for emergency responders and defence. *Journal of Applied Neurosciences*. <https://doi.org/10.4102/jan.v3i1.8>
- Rossouw, J.G., Rossouw, P.J., Paynter, C., Ward, A., & Khnana, P. (2017). Predictive 6 factor resilience scale – Domains of resilience and their role as enablers of job satisfaction. *International Journal of Neuropsychotherapy*, 24–40. Retrieved from <https://driv.ai/ijnpt-2017-1-0025-0040>
- Rossouw, J.G., & Ruberto, M. (2024). Resilience first aid improves peer support and suicide prevention skills: Conceptual design and pilot evaluation. *Researchgate Preprint*. <https://doi.org/10.13140/RG.2.2.26008.81920/1>
- Rossouw, P.J., & Rossouw, J.G. (2016). The predictive 6-factor resilience scale: Neurobiological fundamentals and organizational application. *International Journal of Neuropsychotherapy*. Retrieved from <https://driv.ai/ijnpt-2016-0031-0045>
- Sher, L. (2019). Resilience as a focus of suicide research and prevention. *Acta Psychiatrica Scandinavica*. <https://doi.org/10.1111/acps.13059>
- Shin, L.M., Wright, C.I., Cannistraro, P.A., Wedig, M.M., McMullin, K., Martis, B., Macklin, M.L., Lasko, N.B., Cavanagh, S.R., Krangel, T.S., Orr, S.P., Pitman, R.K., Whalen, P.J., & Rauch, S.L. (2005). A functional magnetic resonance imaging study of amygdala and medial prefrontal cortex responses to overtly presented fearful faces in posttraumatic stress disorder. *Archives of General Psychiatry*, 62(3), 273–281. <https://doi.org/10.1001/archpsyc.62.3.273>
- Siegel, D.J. (2012). *The developing mind: How relationships and the brain interact to shape who we are*. Guilford Publications.
- Simms, L., Ottman, K.E., Griffith, J.L., Knight, M.G., Norris, L., Karakcheyeva, V., & Kohrt, B.A. (2023). Psychosocial peer support to address mental health and burnout of health care workers affected by COVID-19: A qualitative evaluation. *International Journal of Environmental Research and Public Health*. <https://doi.org/10.3390/ijerph20054536>
- Simon, D.H., & Masters, R.K. (2024). Institutional failures as structural determinants of suicide: The opioid epidemic and the Great Recession in the United States. *Journal of Health and Social Behavior*. <https://doi.org/10.1177/00221465231223723>
- Stacey, G., Cook, G., Aubeeluck, A., Stranks, B., Long, L., Krepa, M., & Lucre, K. (2020). The implementation of resilience based clinical supervision to support transition to practice in newly qualified healthcare professionals. *Nurse Education Today*. <https://doi.org/10.1016/j.nedt.2020.104564>
- Ungar, M., & Theron, L. (2020). Resilience and mental health: How multisystemic processes contribute to positive outcomes. *The Lancet Psychiatry*. [https://doi.org/10.1016/S2215-0366\(19\)30434-1](https://doi.org/10.1016/S2215-0366(19)30434-1)
- Uusberg, A., Taxer, J.J., Yih, J., Uusberg, H., & Gross, J.J. (2019). Reappraising reappraisal. *Emotion Review*. <https://doi.org/10.1177/1754073919862617>
- Wheeler, M.S., Arnkoff, D.B., & Glass, C.R. (2017). The neuroscience of mindfulness: How mindfulness alters the brain and facilitates emotion regulation. *Mindfulness*. <https://doi.org/10.1007/s12671-017-0742-x>
- White, R., & Wild, J. (2016). 'Why' or 'How': The effect of concrete versus abstract processing on intrusive memories following analogue trauma. *Behavioral Therapy*. <https://doi.org/10.1016/j.beth.2016.02.004>
- Xinlu, W., Zhongqiu, L., & Chaoqun, D. (2022). Suicide resilience: A concept analysis. *Frontiers in Psychiatry*. <https://doi.org/10.3389/fpsy.2022.984922>
- Yackle, K. (2023). Transformation of our understanding of breathing control by molecular tools. *Annual Review of Physiology*. <https://doi.org/10.1146/annurev-physiol-021522-094142>
- Yates, S.W. (2020). Physician stress and burnout. *The American Journal of Medicine*. <https://doi.org/10.1016/j.amjmed.2019.08.034>
- Zimmermann, C., Strohmaier, S., Herkner, H., Niederkrotenthaler, T., & Schernhammer, E. (2024). Suicide rates among physicians compared with the general population in studies from 20 countries: Gender stratified systematic review and meta-analysis. *BMJ*. <https://doi.org/10.1136/bmj-2023-078964>
- Zumaeta, J. (2018). Lonely at the top: How do senior leaders navigate the need to belong? *Journal of Leadership & Organizational Studies*. <https://doi.org/10.1177/1548051818774548>