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Adult Individual Resilience Interventions: A PRISMA-compliant meta-analysis

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ADMINISTRATIVE INFORMATION

Support - Taipei Tzu Chi Hospital.

Review Stage at time of this submission - Data analysis complete and manuscript prepared to submit.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 05 August 2023 and was last updated on 05 August 2023.

INTRODUCTION

Review question / Objective To investigate the effect of available data on techniques aimed towards enhancing personresilience.

Background Resilience is characterized as replicating, integrating from either adverse or onerous situations, meeting dynamic interplay between human, environmental, and social elements. The American Psychological Society expounds resilience was "recovering" from difficult events and "adopting comfort measures when faced with adversity, trauma, tragedy, threats, or substantial stress-related consequences" (Comas-Diaz et al., 2016). As we know, adulthood is both a distinct and critical period of growth between adolescents and young adulthood (Cohen et al., 2019). Reason for studying the resilience with adults was focused on identifying what led some individuals to avoid traumatic stress. Consequently, within a continual scope to from high (strong capability to recover) to low (poor capacity to rebound), resilience can be referred to as existent in this manner, which has been termed 'thriving' in the literature. Furthermore, it demonstrates the ability of a person to attain a high degree of performance amidst a negative or stressful situation (Meichenbaum, Calhoun, &Tedeschi, 2006).

Rationale Developing resilience can not only assist in mitigating harmful consequences, but can also potentially ameliorate clinical outcomes for patients, which have been identified as an imperative factor of resilience (Dyrbye&Shanafelt, 2012; Dyrbye, Satele, Sloan, &Shanafelt, 2013; Howe, Smajdor, &Stöckl, 2012).

METHODS

Strategy of data synthesis During December 2021, in the following electronic databases, searches were conducted: EMBASE, EBSCO, APA,

PsycINFO, PubMed, Springer Link, and Web of Science for relevant literature published during 2010–2021 using the following keywords: “resilience”, “resilient “, “resiliency “, “randomized controlled trials”, “randomization”, “intervention”, “program”, and “adults “ and language restriction to “English”.

Eligibility criteria For the review, the following criteria were required:
(1) Objectives/aims (units/subjects) or hypotheses of the intervention of encouraging, or constructing individual adults’ (>18 years) resilience; (2) evaluating interventions (treatments) of the efficacy of resilience; (3) the outcome measures the effect of a valid and feasible assessment of resilience; and (4) study design was based on randomization. Above requirements were organized following units/subjects; treatments; outcomes; and study design (UTOS). We included the study proved the precise scales, described scales well, and carried data based on the reliability and validity for similar populations even not used scales which excluded in this study.

Source of evidence screening and selection During December 2021, in the following electronic databases, searches were conducted: EMBASE, EBSCO, APA, PsycINFO, PubMed, Springer Link, and Web of Science for relevant literature published during 2010–2021. Researchers independently screened titles and abstracts reprocessed from the literature based on eligibility criteria for the review. When discrepancies exist among the researchers’ assessment results, discussion involved a third researcher until agreement on inclusion or exclusion was satisfied.

Data management The data can be obtained from published peer-reviewed articles.

Reporting results / Analysis of the evidence Here, compare the results of resilience intervention programs to those under control. After training is complete, the SMDs of resilience levels were presented in Figure 2. REM was used to synthesis the pooled mean effect size from 12 eligible studies in the meta-analysis. Finding of 4 studies presented a trivial significant effect (SMD >2) of the interventions. In the meantime, the combined estimated SMD was 1.33 (95% CI 0.86 to 1.81) when comparing the intervention groups to the control groups. The results showed a moderately beneficial impact favoring the intervention group. Observe an acceptable degree of heterogeneity and indicated an I2 estimate of 88.2%. Furthermore, good quality still expressed a similar moderate positive effect size based on a sensitivity analysis.

Presentation of the results Table 1 showed 4 studies involved mixed interventions which combined mindfulness and cognitive behavioral therapy (CBT). The CBT-based interventions adopted by 3 studies and mindfulness-based techniques conducted by 5 studies. Multiple intervention sessions designed from single session took 2 hours to 28 hours of training over. For the total, 80% of the interventions were conducted through training in person over several sessions. For results of CBT-based training, the estimated pooled SMD was 2.08 (95% CI 1.46 to 2.70, P<0.001) for the intervention groups compared with control groups, indicating a moderately beneficial impact favoring the intervention group. Heterogeneity, I2 estimate of 63% showed minor level among various effects of studies in Figure 3.In the meantime, mindfulness training had minor effect favoring the intervention group (SMD=1.14, 95% CI 0.43 to 1.85, P=0.002). Mixed-based training had similar result (SMD=1.00, 95% CI 0.17 to 1.82, P=0.018) with that of mindfulness.

Language restriction English.

Country(ies) involved Taiwan - Department of Research, Taipei Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, New Taipei City 23142.

Other relevant information The resilience program improves mental health and ability to regulate individuals' emotion.

Keywords resilience; interventions; individual; adults; mental health; meta-analysis.

Contributions of each author
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