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Effectiveness of a Health Promotion Intervention Addressing the Determinants of Stress among Undergraduate Students in the Faculty of Applied Sciences, Rajarata University of Sri Lanka

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Background: Stress is a common response to academic and environmental challenges, particularly among science undergraduates who face high workloads and competitive pressures. High stress among undergraduates contributes to increasing mental health problems, academic underperformance and maladaptive coping such as substance use, making it a critical public health concern in Sri Lanka.

Objective: This study was aimed to reduce the stress among first-year applied science undergraduates at the Faculty of Applied Sciences, Rajarata University of Sri Lanka by addressing its determinants.

Methods: A pre-test post-test study was conducted among 50 purposively selected undergraduates aged 20-24 years. Data collection included a self-administered questionnaire with the Perceived Stress Scale and focus group discussions, conducted before and after 3 month intervention. The intervention involved identifying and addressing stress determinants through activities such as awareness sessions, daily schedules, digital break charts and journal writing. The collected quantitative data were analyzed using descriptive statistics such as paired t-test and qualitative data were analyzed thematically.

Results: The most notable improvement was observed in stress related practices, which showed a statistically significant change ($p=0.000$). In contrast, knowledge ($p=0.650$) and attitudes ($p=0.187$) showed no statistically significant differences. Importantly, overall undergraduate students' stress levels reduced, as reflected in improved Perceived Stress Scale, before the intervention 24% of students reported high stress, whereas this dropped to 10% afterward.

Conclusion: These findings highlight the effectiveness of structured health promotion intervention in university settings, demonstrating their potential to reduce stress levels and promote mental wellbeing. It provides a sustainable framework that can be adapted to other higher education contexts to enhance resilience and overall quality of life.

Keywords: Health promotion intervention, Determinants, Stress