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# Efficacy of Adult Resilience Program in Professionals Working in Special Needs Pre-School Setups

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**June 2025**

**School of Social Sciences and Humanities (S3H)**
**National University of Sciences and Technology (NUST)**
**Sector H-12, Islamabad, Pakistan**

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# List of Acronyms

| | |
|---|---|
| ABA | Applied Behavioral Analysis |
| ARP | Adult Resilience Program |
| ANCOVA | Analysis of covariance |
| BO | Burnout |
| CBI | Copenhagen Burnout Inventory |
| CBT | Cognitive Behavioral Therapy |
| COMOSWB | The Concise Measure of Subjective Wellbeing |
| GSE | General Self Efficacy |
| GSES | The General Self Efficacy Scale |
| JSS | Job Satisfaction Survey |
| LMM | Linear Mixed Models |
| PP | Positive Psychology |
| ROSA | UNICEF Regional Office for South Asia |
| SEC | Socio-Emotional Competence |
| SEL | Socio-Emotional Learning |
| SDG | Sustainable Development Goals |
| SLP | Speech and Language Pathologist |
| SWB | Subjective Wellbeing |
| TIS-6 | Turnover Intention Scale 6 |
| UN | United Nations |
| UNO | United Nations Organization |
| UNICEF | United Nations International Children's Emergency Fund |
| OECD | Organization for Economic Co-operation and Development |
| WHO | World Health Organization |

# Abstract

It is observed that educators and human services providers in special needs education setups might be at higher risk of occupational stress and burnout that leads to turnover. Utilizing a quasi-experimental pretest-posttest design with control (n=14) and experimental (n=14) groups, this study evaluates the efficacy of the Adult Resilience Program (ARP) in improving subjective wellbeing, and general self-efficacy, as well as reducing burnout, and turnover intention among educators and related professionals working in special education preschool setups in Islamabad, Pakistan. Professionals in the experimental group participated in the structured resilience training grounded in cognitive-behavioral therapy and positive psychology, emphasizing socio-emotional competencies such as mindfulness, emotional regulation, and problem-solving. Results indicate significant reductions in burnout, specifically personal and work-related burnout, and turnover intention, as well as experience of negative emotions among ARP participants compared to controls. However, no statistically significant improvements were observed in overall subjective wellbeing, experience of positive emotions, general self-efficacy, or client-related burnout. These findings suggest that structured resilience training programs - specifically ARP - are beneficial in mitigating specific occupational stress factors and improving retention among professionals in high-stress educational settings, highlighting the importance of socio-emotional competence training for educators.



**Keywords:** ARP, Adult Resilience Program, Friends Resilience, Pilot RCT, Linear Mixed Models, SEC, Socio-Emotional Competence Training.

# 1. Introduction

Special education institutions in Pakistan serve students with one or more disabilities in settings separate from mainstream schools and neurotypical peers (Hafeez, 2020; Jahanzaib et al., 2021). Pakistan officially recognizes four disability categories: mental health, physical, visual, and hearing impairments. These account for an estimated 2.54% of the population (Pakistan Poverty Alleviation Fund, 2011). In addition, approximately 13% of household members above the age of five require a certain degree of functional support. Despite international commitments to inclusive education, Pakistan faces persistent challenges. Policy remains fragmented, financial resources are severely constrained, infrastructure is underdeveloped, and teacher preparation is insufficient. Reliable data are also lacking. Consequently, the country continues to depend heavily on private institutions and externally derived models (Caceres et al., 2010; Hafeez, 2020; Qaiser, 1993; UNICEF, 2021).

## 1.1 Workload of Special Needs Educators & Related Professionals

Institutions providing special education preschool services to individuals with physical (sensory, movement, and health related), intellectual, and mental disabilities typically employ multidisciplinary teams. According to Hasenfeld's (1983) *Human Service Organizations* model, the workload for these professionals working directly with children with special needs is particularly higher. The reason for which is that these professionals engage primarily in *People Changing* services (defined as direct involvement in interventions to improve their functioning), focusing on individuals classified as *Malfunctioning: Client Type* (defined as having deficits or dysfunctions needing active intervention).

## 1.2 Educator / Professional Wellbeing and its Impact

Early years educators significantly influence a student's lifelong development, their psychological state directly impacts teaching effectiveness and students' socio-emotional growth, identity, autonomy, and achievement (Jennings & Greenberg, 2009; Mercer, 2018). Their level of subjective wellbeing directly affects the interactions quality with students, influencing student cooperation, empathy, motivation, and behavior (Diener et al., 2009; Penttinen et al., 2020; Siekkinen et al., 2013). And when compared on levels of psychological wellbeing, even in general

education, the early years/primary school teachers in Pakistan score lower than their Turkish and American counterparts (Ozu et al., 2017). An educator's perceived self-efficacy strongly correlates with effective classroom management, student performance, job satisfaction, and lower turnover intention (Federici & Skaalvik, 2012; Jennings & Greenberg, 2009; Moran & Hoy, 2001). And their burnout negatively impacts teacher-student interactions, instructional quality, student readiness, and behavioral outcomes, creating a cyclical pattern known as the *Burnout Cascade*, where the educator's level of burnout results in a potentially negatively framed teacher-child interaction that further add to the teacher's burnout (Bernal, 2019; Friedman-Krauss et al., 2014; Jennings & Greenberg, 2009). Special educators and related professionals, due to complex demands and responsibilities in managing diverse student needs, emotional dynamics, and conflicts face higher burnout and stress, often leading to absenteeism, turnover, and lower service quality (Bettini et al., 2017; Plantiveau et al., 2017). The likelihood of employees leaving voluntarily (turnover), is notably higher among educators compared to other human services professions, impacting educational quality and student outcomes (Cerit, 2015; Imran et al., 2017; Loeb et al., 2005). A lack of socio-emotional competence among educators is associated with heightened job-related stress, weakened classroom management, and diminished quality of student–teacher interactions (Abdul-Samad et al., 2011; Jennings & Greenberg, 2009; Ramdan et al., 2020). Effective emotional management, work-life balance, emotional intelligence, and mindfulness are crucial strategies to mitigate burnout and enhance teacher efficacy (Mulyani et al., 2021; Puertas-Molero et al., 2019).

## 1.3 Role of Socio-Emotional Competence Training

Cann et al. (2023) systematically reviewed educator wellbeing interventions, reporting that multi-foci interventions, which integrate mindfulness, coping strategies, emotional regulation, physical exercise, and time management, yielded the most significant benefits. Socio-emotional skill-building is significantly associated with reduced stress, improved emotional support to students, effective classroom management, and enhanced resilience (Brown & Ryan, 2003; Jennings & Greenberg, 2009; Jennings, 2015). Educators' socio-emotional competence not only benefits their own wellbeing but also significantly enhances socio-emotional educational outcomes for all students, which includes students with special educational needs (Khokhar et al., 2023).

The role of socio-emotional competence training in enhancing educator wellbeing and reducing stress has gained significant attention in educational research (Cumming, 2017). Teachers' perceptions of environmental events and their emotional responses significantly impact their stress levels, influencing turnover intentions and overall occupational wellbeing (Hanif et al., 2011). Socio-emotional skill-building, particularly mindfulness, has been highlighted as effective in mitigating the negative impacts of occupational stress and improving classroom environments (Jennings, 2015). Positive psychology approaches, including emotional intelligence development (Vesely et al., 2014), increased optimism, self-efficacy enhancement, and life satisfaction interventions (Shoshani & Steinmetz, 2014), have demonstrated effectiveness in promoting teachers' psychological wellbeing. Continued professional and personal development is essential, as it not only improves educators' wellbeing but also indirectly benefits student wellbeing and classroom inclusivity (Narea et al., 2022).

Numerous prevention programs at primary education level have been developed for teaching students' socio-emotional competencies (Iizuka et al., 2014). However, these programs focus on skill building in students without providing explicit instructions to educators, or focus on their socio-emotional competency, assuming that professionals in these setups are already prepared to be effective in their role of an emotional coach and role model (Jennings & Greenberg, 2009). Research related to exploring effective methods for promoting educator's socio-emotional competence is limited (Jennings et al., 2013). Iizuka et al., (2014) suggests that literature should also focus on professionals' socio-emotional outcomes, as it would also improve student's outcomes. There is evidence to support that when educators were provided training to promote social and emotional skills of children, along with being provided training in the resilience program for themselves, the students were able to maintain their gains in long-term follow ups, as well as professionals reporting higher resilience and lower stress (Iizuka et al., 2014).

In conclusion in a developing country like Pakistan, education in general is considered a stressful profession, with very few quality studies providing sound empirical evidence for professional development in a non-western setting (Hanif et al., 2011), further layer of stress is added by special education as the professional is expected to attend to an individual with diverse needs (Al-Ali et al., 2021; Al-Farah, 2001; Hasenfeld, 1983). Reduced wellbeing and burnout are apparent in special educators and related professionals but proactive strategies to mitigate them are few (Bettini et al., 2017; Blood et al., 2002; Hameed, 2005; Mulyani et al., 2021; Ozu et al.,

2017; Plantiveau et al., 2017). Although there is an emphasis on positive psychology strategies across the education sector, as well as specifically for educator well-being (Avola et al., 2025; Cann et al., 2023; Jennings, 2015; Ozu et al., 2017), at large the available programs mostly focus on students assuming competence in educators (Jennings & Greenberg, 2009; Cann et al., 2023).

## 1.4 Adult Resilience Program (ARP)

Research in the field of mental health has concentrated on mental illness and psychopathology. However, the dual-factor model of mental health posits that complete mental well-being encompasses not only the absence of negative symptoms but also the presence of positive psychological attributes (Greenspoon & Saklofske, 2001). The *Adult Resilience Program (ARP)* is a part of the FRIENDS Resilience programs, based on principals of cognitive behavioral therapy and positive psychology (Barrett, 2011). It aims to develop resilience in the participants (age 16 years and older) by fostering social and emotional competencies (Barrett, 2011). A psycho-educative approach is utilized to enhance protective factors, while minimizing risk factors, on the triadic level (Garmezy, 1991), so the participant can handle and cope with respective developmental challenges, implying age-appropriate techniques (Iizuka et al., 2014). ARP has been translated and adapted to Urdu language at the department of behavioral sciences, National University of Sciences & Technology (NUST), Islamabad in a series of prior projects.

There is preliminary support for the evidence of effectiveness of adult resilience program in university students, schoolteachers (Iizuka et al., 2014; Games et al., 2019), and parents in the context of family intervention. Other programs based on the theoretical model of FRIENDS resilience have also been so far reported to show promising results in the educational context. The FRIENDS Resilience Program is supported by the World Health Organization (Friends Resilience, 2020) as an evidence-based strategy for anxiety related issues. It can be applied as a universal, selective, or an indicated intervention program (Weisz et al., 2005) and has been implemented in various countries and at all prevention levels efficaciously.

Globally, programs targeting social-emotional competence and resilience among educators have shown positive outcomes in reducing stress and improving professional effectiveness. In Pakistan, however, such initiatives are rare and focus on student outcomes rather than educator wellbeing. This gap, coupled with the assumption that educators naturally possess these skills, contributes to unsustainable environments in special needs education. Most local literature offers

recommendations for professional development (Basit et al., 2022; Batool et al., 2023; Deeba et al., 2023; Ehsan, 2018; Hafeez, 2020; Kamran & Thomas, 2022; Kazmi & Kazmi, 2018; Khokhar et al., 2023), but few studies implement interventions. Limited and scarce research in this context results in the implementation of strategies in the field that are not translated or adapted effectively. Professionals need targeted training to manage both their own mental health and their students' wellbeing (Narea et al., 2022).

## 1.5 Research Objectives

1. To observe the levels of subjective wellbeing, self-efficacy, burnout, and turnover intention among professionals working in special needs preschools in Islamabad.
2. To compare demographics, workload characteristics, subjective wellbeing, self-efficacy, burnout, and turnover intention between the experimental and control groups at baseline.
3. To evaluate the efficacy of the Adult Resilience Program in improving subjective wellbeing and self-efficacy in the experimental group compared to the control group at post-assessment.
4. To evaluate the efficacy of the Adult Resilience Program in reducing burnout and turnover intention in the experimental group compared to the control group at post-assessment.
5. To assess the fidelity of the Adult Resilience Program training in accordance with its standard implementation procedures.

# 2. Methods

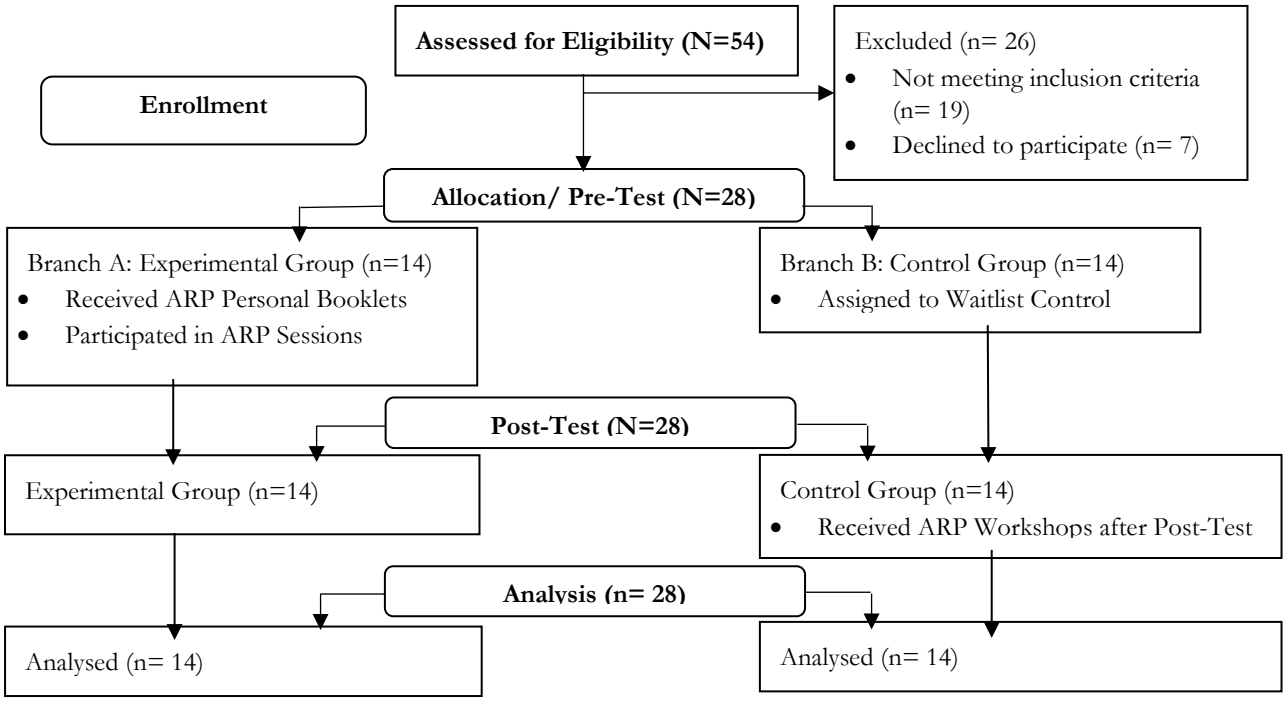
Using a quasi-experimental, wait-list controlled, pre- and post-intervention research design (Cook & Campbell, 1979), the primary target of this study was to determine the effect that participation in the ARP intervention had on self-reported subjective wellbeing, self-efficacy, burnout, and turnover intention, experienced by professionals in special needs preschools. It was hypothesized that participants in the ARP group would score significantly higher on general self-efficacy, and subjective wellbeing; and significantly lower on burnout and turnover intention, as compared to the waitlist control group at post intervention.

## 2.1 Participants

For this intervention study purposive sampling was utilized due to the small size of the targeted population in the given region (Abbas & Thakur, 2017). Professionals working in two similarly structured campuses of a special needs services institute with attached preschool were recruited. Experimental and Control groups status was assigned to each of the branch (cluster). The sample included consenting teachers and their assistance staff, behavioural therapist, speech and language pathologists, occupational therapists, and other staff who are responsible for development and implementation of educational plans and rehabilitation of students. Those who were utilizing mental health services for themselves or were undergoing some other personal or professional development trainings were excluded due to potential confounds. The sample (N = 28) was evenly divided between the control group (n = 14, 50.0%) and the experimental group (n = 14, 50.0%). Attrition rate was nil (0%). Most participants were between 21 and 30 years old (n = 23, 82.1%), followed by 31 years or older (n = 4, 14.3%), and 20 years or younger (n = 1, 3.6%). The sample was predominantly female (n = 23, 82.1%), with a smaller proportion of males (n = 5, 17.9%). Most participants held a 16-year degree (BS/MA/MSc; n = 13, 46.4%) or an 18-year degree (MS/MPhil; n = 12, 42.9%), with a smaller number holding a 14-year degree (BA/BSc; n = 3, 10.7%), majority having received training specific to special needs education (n = 18, 64.3%). For primary designation, the most common roles were within the ABA therapist (n = 11, 39.3%) and teaching positions (n = 10, 35.7%), followed by SLP (n = 4, 14.3%), clinical psychologists (n = 2, 7.1%), and one occupational therapist (n = 1, 3.6%). Most participants did not report any diagnosed medical or mental health condition (n = 25, 89.3%). Average career time invested in the

current organization was reported as approx. 1 year 8 month (SD= 1 year 3 months). The average daily work-related overtime was reported as approx. 1 hour 40 minutes (SD= 1 hour 11 minutes).

Figure 1: CONSORT Flowchart of Participants




## 2.2 Procedure

The Ethical Committee at the School of Social Sciences and Humanities, NUST, Islamabad, granted ethical approval. The research team then approached relevant special needs organizations and secured institutional consent through formal agreements on data sharing, confidentiality, and ethical procedures. The authors of the data collection tools provided legal and ethical permissions for their use. The researchers briefed participants on the program and obtained informed consent, highlighting voluntary participation. A third party randomly allocated participants to the control and experimental groups to minimize bias. The control group joined a waitlist, while the experimental group received the intervention. The research team coordinated training schedules with the organization. Because of unstable internet access, participants used printed ARP Urdu booklets that contained program content, exercises, and homework. The

facilitators also downloaded digital materials in advance and presented them using a portable projector during sessions.

The sessions were conducted by the author; a certified ARP facilitator trained via the official Friends Resilience Portal. Baseline (pre-test) data on outcome measures was collected during the introductory stage. The intervention followed the ARP protocol, with sessions held twice weekly after work hours for 40–45 minutes over seven weeks. Each week covered one stage of the ARP, with additional sessions added when needed due to time or resource constraints. To account for attendance – a key factor in intervention efficacy (Cann et al., 2023) – participants who missed sessions joined follow-up online meetings on weekends, and personal follow-ups were arranged to ensure full content coverage. Post-test data was collected one week after Stage 5 to allow time for implementation of strategies in daily life. Recommended statistical analyses were performed, and hypotheses tested. All sessions were recorded and independently reviewed by a qualified ARP practitioner to assess fidelity and adherence to protocol.

### 2.2.1 Intervention Protocol

Each session began with an agenda and a warm-up activity where participants shared positive experiences. The facilitator then introduced the session's core concept, followed by group discussions linking it to individual experiences. Interactive activities were conducted alongside discussions, with digital materials and visuals. Sessions concluded with a summary, gratitude journaling, and a warm-down activity. The content and skills focused in each session is summarized further in table below (see Table 1).

Table 1: Adult Resilience Program Contents

| Stages | Session Title | Contents & Skills Focus |
|---|---|---|
| Introduction | Introduction to the group. | Group guidelines; The purpose for the intervention; Setting individual goals in different areas of life. |
| Stage 1 | Session 1: Being Aware of our Feelings.<br><br>Session 2: Learn to be Mindful. | Developing Awareness of our Feeling; The message our body gives us; Recognizing emotions & their intensity; Self regulation & Self Soothing; Empathy Skills. |

| Stages | Session Title | Contents & Skills Focus |
|---|---|---|
| | | Relaxation and attention training; Mindfulness/attention training; Mindful eating/drinking; Mindful breathing and colouring. |
| Stage 2 | Sesson 3: Inner helpful thoughts. | Focusing on positive self-talk; Helpful powerful reminders; The thought feeling behaviour pathway; Thought Challengers; Thought, feelings, Actions. |
| Stage 3 | Session 4: Feeling resilient | Building resilience; How you handled a difficult situation; Owning our successes; Developing our resilience; Identifying our personal qualities & strength. |
| | Session 5: Feeling resilient | Values based role models and support teams; Naming role models; Helping others; Support networks; Connecting with others. |
| Stage 4 | Session 6: Coping with challenges. | Communication skills; Dealing with emotions; Communication styles; The CALM examples; Being assertive. |
| | Session 7: Coping with challenges. | Exploring solutions and coping step plans; Applying the 5 Stage solution finding plan; Fun activity / Rewarding Yourself; Creating a Coping Step Plan; My Coping step plan. |
| Stage 5 | Session 8: Enjoying a healthy lifestyle. | Enjoying a healthy lifestyle; Changing old habits; Healthy living practices; Small steps towards healthy eating. |
| | Session 9: Be prepared for future challenges. | Be prepared for future challenges; Facing challenging situations; Preparing for the future. |

## 2.3 Instruments

### 2.3.1 The General Self-Efficacy Scale (GSES)

Schwarzer & Jerusalem (1993) defines perceived self-efficacy as the belief in one's ability to handle challenges and novel situations, promoting goal setting, persistence, and resilience. The

General Self-Efficacy Scale (GSES; Schwarzer & Jerusalem, 1993), culturally adapted by Tabbassum et al. (2003), is a 10-item unidimensional measure rated on a 4-point Likert scale, assessing a broad and stable sense of personal competence in managing stress. In this study, the GSES demonstrated high reliability with Cronbach's α = .90 and McDonald's ω = .90.

### 2.3.2 Concise Measure of Subjective Well-being Scale (COMOSWB).

Subjective well-being refers to an individual's cognitive and emotional evaluations of their life (Diener et al., 2009). The Concise Measure of Subjective Well-being (COMOSWB; Suh & Koo, 2011), culturally adapted by Hassan et al. (2019), includes three subscales: life satisfaction (cognitive), positive emotion, and negative emotion. It comprises 9 items rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Overall well-being is calculated by summing life satisfaction and positive emotion scores and subtracting the negative emotion score. Reliability was strong across subscales: life satisfaction (α = .87, ω = .89), positive emotions (α = .74, ω = .74), and negative emotions (α = .74, ω = .80).

### 2.3.3 Copenhagen Burnout Inventory (CBI)

Burnout is defined as physical and psychological fatigue and exhaustion that is perceived by the person as related to their work (Kristensen et al., 2005). The Copenhagen Burnout Inventory (CBI; Kristensen et al., 2005) translated by Ashraf et al. (2022), includes 19 items rated on a 5-point scale (100 = always to 0 = never), covering three subscales: personal burnout (general fatigue), work-related burnout (linked to job demands), and client-related burnout (specific to working with people). Subscale scores range from 0 to 100, with 50 or above indicating burnout. Reliability was strong for the overall scale (α = .88, ω = .86) as well as subscales: personal burnout (α = .82, ω = .82), work-related (α = .86, ω = .85), and client-related (α = .77, ω = .78).

### 2.3.4 Turnover Intention Scale (TIS-6)

Willful departure of an employee from an organization is defined as turnover (de-Caroon, 2004). The Turnover Intention Scale-6 (TIS-6; Roodt, 2004), is a 6-item self-report measure rated on a 5-point Likert scale (1 = Never, 5 = Always), with higher scores indicating stronger turnover intention. A score of 18 or above suggests a fervent desire to leave (Brothma & Roodt, 2012). For this study, the scale was translated and adapted to Urdu by the author following World Health

Organization (2019) guidelines. Reliability was acceptable (α = .78, ω = .80). The Urdu version showed a significant negative correlation (r = –.575) with the Job Satisfaction Survey Urdu (Spector, 1994; Shahzad & Begum, 2011), supporting convergent validity. Exploratory factor analysis revealed one factor (Eigenvalue > 1), explaining 62.25% of the variance, with loadings > 0.30. KMO = 0.814 and Bartlett's Test ($p < .001$) confirmed data suitability for EFA.

### 2.3.5 Fidelity Checks

Program fidelity was assessed through video-recorded sessions, which were evaluated by a qualified third-party using the *Treatment Integrity – Adult Resilience Sessions Form* and the *Facilitator Skills Form* (Adult Resilience Treatment Integrity Measure, 2023). The session integrity form evaluates how well the program and activity-specific aims are achieved, while the facilitator form assesses group management and micro-skills. Both use a 5-point Likert scale ranging from 0 (Extremely Well) to 4 (Not at all).

### 2.3.6 Social Validity

Social validity was assessed using the voluntary *FRIENDS Resilience Skills Adults Evaluation Form* (Friends Resilience, 8th Edition; Barrett, 2020), administered to the experimental group. The form evaluates the perceived utility and relevance of the ARP program on a 5-point Likert scale (0 = not at all, 5 = very much) and identifies the most frequently used ARP skills.

## 2.4 Data Analysis Plan

Descriptive statistics were used to analyze demographics and pretest means. Chi-square tests, Independent Sample t-tests, and Mann-Whitney U tests were conducted to assess baseline differences between the experimental and control groups to rule out potential confounds (Twisk et al., 2018). Program efficacy was evaluated using Linear Mixed Models (LMM), which account for both fixed effects (e.g., treatment) and random effects (e.g., individual variability), offering a robust approach for quasi-experimental designs with clustered groups (Galecki & Burzykowski, 2013). Social validity and program fidelity were analyzed descriptively using the relevant scales.

# 3. Results

The mean GSES (see Table 2) observed was 32.36 (SD = 5.10), when compared to Globally Observed Mean =29.55, (SD = 5.32, kurtosis = .38, skewness = –.52, in a survey conducted across 25 countries, N = 19,120; Scholz et al., 2002), a one-sample t-test indicated that the observed mean was significantly higher than the population mean [t(27)=2.91, p= 0.007, Mean Diff= 2.80, CI= 0.82 to 4.78, Cohen's D=0.55].

The TIS-6 mean (see Table 2) was 19 (SD = 3.08), which is above the cutoff for high turnover intention as suggested by Brothma & Roodt (2012). The overall burnout, personal burnout, and work-related burnout means were also above the cut-off of 50 recommended by Kristensen et al., (2005).

Table 2: Pretest Descriptive & Normality Statistics for Dependent Variables (n=28)

| Variable | Mean | SD | Min – Max | Skewness | Kurtosis |
|---|---|---|---|---|---|
| General Self Efficacy Scale (GSES) | 32.36 | 5.10 | 19 – 40 | -0.73 | 0.26 |
| Subjective Wellbeing Total (COMOSWB) | 13.46 | 5.90 | -1 – 23 | -0.57 | 0.08 |
| SWB Life Satisfaction Subscale | 10.89 | 2.25 | 6 – 15 | 0.12 | -0.62 |
| SWB Positive Emotions Subscale | 10.29 | 2.42 | 6 – 15 | -0.26 | -0.64 |
| SWB Negative Emotions Subscale | 7.71 | 2.77 | 3 – 14 | 0.78 | -0.08 |
| Turnover Intention Score (TIS-6) | 19.00 | 3.08 | 13 – 24 | -0.13 | -1.12 |
| Copenhagen Burnout Inventory Total | 54.70 | 15.09 | 31.15 - 80.36 | 0.12 | -1.14 |
| CBI: Personal Burnout Subscale | 62.50 | 19.61 | 33.33 - 95.83 | 0.32 | -0.99 |
| CBI: Work Related Burnout Subscale | 56.51 | 18.77 | 21.43 - 89.29 | -0.02 | -0.95 |
| CBI: Client Related Burnout Subscale | 45.09 | 19.11 | 0 - 79.17 | -0.24 | -0.08 |

## 3.2 Preliminary Analysis

The likelihood ratio $G^2(1) = 4.52$, $p = .03$ (see Table 3), suggested a significant association between diagnosed medical/mental health conditions and group membership. A point-biserial correlation to assess its relationship with pre-test scores indicated that no significant correlation exists, suggesting that the difference in groups based on their Medical/Mental Health Condition, does not need to be controlled.

None of the demographic variables showed meaningful or statistically significant differences between the experimental and control groups at pre-test (see Table 3, 4, 5).

Table 3: Pretest Categorical Demographics: Chi-Square Test (n=28)

| Variable | Category | Control n (%) | Experimental n (%) | $\chi^2$ (df) | Likelihood Ratio |
|---|---|---|---|---|---|
| Age Category | 20 years or younger | 0 (0.0%) | 1 (7.1%) | 5.856 (4) | 6.732 |
| | 21 to 25 years old | 3 (21.4%) | 7 (50.0%) | | |
| | 26 to 30 years old | 9 (64.3%) | 4 (28.6%) | | |
| | 31 to 35 years old | 2 (14.3%) | 1 (7.1%) | | |
| | 36 years or older | 0 (0.0%) | 1 (7.1%) | | |
| Gender | Male | 2 (14.3%) | 3 (21.4%) | 0.243 (1) | 0.245 |
| | Female | 12 (85.7%) | 11 (78.6%) | | |
| Monthly Income (Rs.) | 20k to 30k | 3 (21.4%) | 0 (0.0%) | 5.393 (3) | 7.325 |
| | 30k to 50k | 7 (50.0%) | 9 (64.3%) | | |
| | 50k to 100k | 4 (28.6%) | 3 (21.4%) | | |
| | More than 100k | 0 (0.0%) | 2 (14.3%) | | |
| Formal Education Level | BA/BSc (14y) | 2 (14.3%) | 1 (7.1%) | 3.590 (2) | 3.673 |
| | BS/MA/MSc (16y) | 4 (28.6%) | 9 (64.3%) | | |
| | MS/MPhil (18y) | 8 (57.1%) | 4 (28.6%) | | |
| Special Ed. Training | None | 6 (42.9%) | 4 (28.6%) | 0.622 (1) | 0.625 |
| | Yes | 8 (57.1%) | 10 (71.4%) | | |
| Primary Designation | Teachers | 5 (35.7%) | 5 (35.7%) | 4.091 (4) | 5.296 |
| | ABA | 5 (35.7%) | 6 (42.9%) | | |
| | SLP | 3 (21.4%) | 1 (7.1%) | | |
| | OT | 1 (7.1%) | 0 (0.0%) | | |
| | Clinical Psychologist | 0 (0.0%) | 2 (14.3%) | | |
| Secondary Designation | Management | 1 (7.1%) | 2 (14.3%) | 2.933 (5) | 3.350 |
| | Teachers | 1 (7.1%) | 2 (14.3%) | | |
| | ABA | 1 (7.1%) | 2 (14.3%) | | |
| | Clinical Psychologist | 2 (14.3%) | 1 (7.1%) | | |
| | Shadow Teacher | 0 (0.0%) | 1 (7.1%) | | |
| | None | 9 (64.3%) | 6 (42.9%) | | |
| Diagnosed Med/Mental | No | 14 (100.0%) | 11 (78.6%) | 3.360 (1) | 4.520* |
| | Yes | 0 (0.0%) | 3 (21.4%) | | |

| Variable | Category | Control n (%) | Experimental n (%) | $\chi^2$ (df) | Likelihood Ratio |
|---|---|---|---|---|---|
| Health Condition | | | | | |

*p<0.05, **p<0.01, ***p<0.001

Table 4: Pretest Parametric Demographics: Independent t-test (n=28)

| Variables | Control | | Experimental | | t (28) | *p* | Cohen's *d* |
|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | | | |
| Time Invested in Current Organization (Months) | 25.29 | 16.59 | 15.79 | 12.39 | -1.72 | 0.098 | -0.649 |
| Number of Special Needs Organizations Worked with, in Past | 1.14 | 1.35 | 0.57 | 0.76 | -1.38 | 0.179 | -0.522 |
| Daily Hours spent working directly w/ Children | 6.57 | 0.94 | 6.43 | 1.92 | -0.25 | 0.804 | -0.095 |
| Daily Hours spent in Management related tasks | 2.14 | 1.29 | 2.04 | 1.12 | -0.23 | 0.816 | -0.089 |

Table 5: Pretest Nonparametric Demographics: Mann–Whitney U Test (n=28)

| Variable | Mann-Whitney U | Mean Rank | | Z | *p* (2-tailed) | Exact Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| | | Control | Experimental | | | |
| Total No. of Students engaged Daily. | 86.50 | 15.32 | 13.68 | -0.53 | 0.59 | 0.60 |
| Daily Hours of Working Overtime. | 86.50 | 13.68 | 15.32 | -0.56 | 0.58 | 0.60 |
| Time Invested in Special Education (Months) | 69.00 | 16.57 | 12.43 | -1.34 | 0.18 | 0.19 |

Table 6: Pretest Dependent Variables Across Groups: Independent t-test (n=28)

| Variable | Control | | Experimental | | T | *p* | *Cohen's d* |
|---|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | | | |
| General Self Efficacy Scale | 33.07 | 5.21 | 31.64 | 5.08 | -0.74 | 0.47 | -0.28 |
| Subjective Wellbeing Total | 14.00 | 6.53 | 12.93 | 5.40 | -0.47 | 0.64 | -0.18 |
| SWB Life Satisfaction | 11.07 | 2.37 | 10.71 | 2.20 | -0.41 | 0.68 | -0.16 |
| SWB Positive Emotions | 10.79 | 2.39 | 9.79 | 2.42 | -1.09 | 0.28 | -0.42 |
| SWB Negative Emotions | 7.86 | 3.16 | 7.57 | 2.44 | -0.27 | 0.79 | -0.10 |
| Turnover Intention Scale | 19.50 | 3.18 | 18.50 | 3.01 | -0.86 | 0.40 | -0.32 |
| Copenhagen Burnout Inventory | 55.87 | 18.52 | 53.53 | 11.26 | -0.40 | 0.69 | -0.15 |
| CBI: Personal Burnout | 60.42 | 20.66 | 64.58 | 19.04 | 0.56 | 0.58 | 0.21 |
| CBI: Work Related Burnout | 56.89 | 22.04 | 56.12 | 15.69 | -0.11 | 0.92 | -0.04 |
| CBI: Client Related Burnout | 50.30 | 21.89 | 39.88 | 14.86 | -1.47 | 0.15 | -0.56 |

The independent samples t-test conducted to compare the dependent variables at pre-test between the experimental and control groups assessed that no significant differences existed between groups before the intervention (see Table 6). This suggests that the groups were well-matched in terms of characteristics before the intervention, which is essential for ensuring the validity of subsequent comparisons in the study.

## 3.3 Efficacy of Adult Resilience Program

Linear Mixed Model (LMM) analyses were conducted to examine the effects of the intervention on Dependent variables over time (see Table 7). The model included Group (experimental vs. control) and Time (pre-test vs. post-test) as fixed effects, along with their interaction. Participant-level variability was accounted for using random intercepts. Checks were conducted to ensure assumptions of correctly specified random effects, normality of residuals, homoscedasticity of residuals, independence of residuals, and multicollinearity.

Table 7: Linear Mixed Model: Fixed Effects Estimates (Maximum Likelihood) (n=28)

| Variable | Control Group | | Experimental Group | | Main Effect |
|---|---|---|---|---|---|
| | Pretest | Post-test | Pretest | Post-test | (Group x Time) |
| | *EMM* ± *SE* | *EMM* ± *SE* | *EMM* ± *SE* | *EMM* ± *SE* | F (1, *28*), *p* |
| GSES | 33.07 ± 1.18 | 33.00 ± 1.18 | 31.64 ± 1.18 | 33.07 ± 1.18 | 0.76 |
| SWB Total | 14.00 ± 1.45 | 13.85 ± 1.45 | 12.93 ± 1.45 | 16.00 ± 1.45 | 3.06 |
| Life Satisfaction | 11.07 ± 0.77 | 11.36 ± 0.77 | 10.71 ± 0.77 | 11.50 ± 0.77 | 0.16 |
| Positive Emotions | 10.79 ± 0.59 | 10.57 ± 0.59 | 9.79 ± 0.59 | 11.29 ± 0.59 | 3.04 |
| Negative Emotions | 7.86 ± 0.69 | 8.07 ± 0.69 | 7.57 ± 0.69 | 6.07 ± 0.69 | 4.58* |
| TIS-6 | 19.50 ± 0.89 | 21.07 ± 0.89 | 18.50 ± 0.89 | 16.36 ± 0.89 | 4.88* |
| CBI Total | 55.87 ± 4.61 | 58.06 ± 4.61 | 53.53 ± 4.61 | 36.52 ± 4.61 | 10.28** |
| CBI: Personal | 60.42 ± 5.54 | 63.39 ± 5.54 | 64.58 ± 5.54 | 40.48 ± 5.54 | 11.05** |
| CBI: Work-Related | 56.89 ± 5.06 | 63.78 ± 5.06 | 56.12 ± 5.06 | 39.03 ± 5.06 | 10.87** |
| CBI: Client- Related | 50.30 ± 5.56 | 47.02 ± 5.56 | 39.88 ± 5.56 | 30.06 ± 5.56 | 0.72 |

*p<0.05, **p<0.01, ***p<0.001

*EMM* = Estimated Marginal Means, *SE* = Standard Error

Table 8: Post hoc: Paired t-test for Significant LMM Interactions (n=28)

| Variable | Group | Pre-Test | Post-Test | Mean Diff. | SD | T | *p* | Cohen's *d* |
|---|---|---|---|---|---|---|---|---|
| TIS-6 | Control | 19.50 | 21.07 | -1.57 | 2.90 | -2.03 | .064 | -0.542 |
| | Experimental | 18.50 | 16.36 | 2.14 | 5.84 | 1.37 | .193 | 0.367 |
| CBI: Total | Control | 55.87 | 58.06 | -2.19 | 15.25 | -0.54 | .599 | -0.144 |
| | Experimental | 53.53 | 36.52 | 17.01 | 17.55 | 3.63 | .003 | 0.969 |
| CBI: Personal | Control | 60.42 | 63.39 | -2.98 | 20.96 | -0.53 | .604 | -0.142 |
| | Experimental | 64.58 | 40.48 | 24.11 | 23.69 | 3.81 | .002 | 1.017 |
| CBI: Work Related | Control | 56.89 | 63.78 | -6.89 | 16.84 | -1.53 | .150 | -0.409 |
| | Experimental | 56.12 | 39.03 | 17.09 | 22.68 | 2.82 | .014 | 0.754 |
| SWB: Neg Emotion | Control | 7.86 | 8.07 | -0.21 | 2.49 | -0.32 | .752 | -0.086 |
| | Experimental | 7.57 | 6.07 | 1.50 | 1.87 | 3.00 | .010 | 0.802 |

For GSES (see Table 7), the main effect of Group (Experimental vs. Control) was not statistically significant, ($t(46) = -0.04$, $p = .966$), indicating no overall difference between groups. The main effect of Time (Pre vs. Post) was also not significant ($t(28) = -1.17$, $p = .251$), suggesting

that scores did not change from pre-test to post-test across all participants. The Group × Time interaction was also non-significant, ($t(28)= 0.87$, $p= .392$), indicating that the intervention did not lead to differential changes in GSES over time.

For SWB (see Table 7), a significant main effect of Time ($t(22.14) = -2.48$, $p = .021$) indicated change from pre- to post-test , but no significant Group ($t(44.99) = -0.44$, $p = .661$) or Group × Time interaction effects ($t(28) = 1.75$, $p = .091$) were found. For SWB: Life Satisfaction, all effects were non-significant: Group ($t(50.20) = -0.13$, $p = .897$), Time ($t(28) = -0.89$, $p = .384$), and Group × Time interaction ($t(28) = 0.40$, $p = .694$). For SWB: Positive Emotions, a significant Time effect ($t(28) = -2.16$, $p = .040$) indicated change from pre- to post-test, while Group ($t(51.25) = -0.86$, $p = .396$) and Group × Time interaction ($t(28) = 1.74$, $p = .093$) remained non-significant. For SWB: Negative Emotions, all effects were significant: Group ($t(39.05) = 2.06$, $p = .046$), Time ($t(28) = 2.65$, $p = .013$), and Group × Time interaction ($t(28) = -2.14$, $p = .041$), indicating that the intervention significantly reduced negative emotions in the Experimental group. Estimated marginal means showed a reduction in scores for the Experimental group (from M = 7.57 to M = 6.07), while the Control group's scores slightly increased (from M = 7.86 to M = 8.07). Paired sample *t*-tests (see Table 8) supported these findings, showing significant change only in the Experimental group.

For TIS-6 (see Table 7), a significant main effect of Group ($t(52) = 3.76$, $p < .001$) indicated a difference in turnover intention between the experimental and control groups. However, the main effect of Time was non-significant ($t(28) = 1.80$, $p = .082$), suggesting no overall change from pre-to post-test within the experimental group. The significant Group × Time interaction ($t(28) = -2.21$, $p = .035$; $F(1,28) = 4.88$, $p = .035$) indicated a differential effect of the intervention. Estimated marginal means showed that the Control group's turnover intention increased from pre-test (M = 19.50, SE = 0.89) to post-test (M = 21.07, SE = 0.89), while the Experimental group's scores decreased from pre-test (M = 18.50, SE = 0.89) to post-test (M = 16.36, SE = 0.89). However, paired sample *t*-tests (see Table 8) showed no significant within-group change, suggesting the interaction effect may reflect divergent trends across both groups rather than a clear intervention-driven reduction in the Experimental group alone. This is supported by the non-significant main effect of Time (see Table 7).

For overall burnout (CBI Total; see Table 7), significant main effects were found for Group ($t(41.95) = 3.30$, $p = .002$) and Time ($t(28) = 4.02$, $p < .001$), along with a significant Group ×

Time interaction ($t(28) = -3.21$, $p = .003$), indicating that the intervention led to a meaningful reduction in burnout. Estimated marginal means showed a decrease in the Experimental group (from M = 53.53 to M = 36.52) and a slight increase in the Control group (from M = 55.87 to M = 58.06). Paired *t*-tests (See Table 8) confirmed significance in the Experimental group only. For Personal Burnout, Time ($t(28) = 4.19$, $p < .001$) and the Group × Time interaction ($t(28) = -3.33$, $p = .002$) were significant, while Group was not ($t(46.26) = 2.93$, $p = .005$), showing a notable reduction in the Experimental group (M = 64.58 to M = 40.48) versus minimal change in the Control group. Work-Related Burnout showed significant effects for Group ($t(45.44) = 3.46$, $p = .001$), Time ($t(28) = 3.32$, $p = .002$), and Group × Time interaction ($t(28) = -3.30$, $p = .003$), with Experimental group scores dropping (M = 56.12 to M = 39.03) while Control scores rose (M = 56.89 to M = 63.78). Paired *t*-tests (see Table 8) confirmed significance in the Experimental group only for CBI: Total, CBI: Personal, and CBI: Work-Related. In contrast, for Client-Related Burnout, only the Group effect was significant ($t(44.23) = 2.16$, $p = .036$); Time ($t(28) = 1.80$, $p = .083$) and Group × Time interaction ($t(28) = -0.85$, $p = .404$) were not, suggesting no significant intervention effect. Scores across both groups decreased over time, though the Experimental group showed a larger numerical reduction (M = 39.88 to M = 30.06) compared to the Control group (M = 50.30 to M = 47.02), overlap of confidence intervals also indicated the change was not statistically significant (see Table 7).

## 3.4 Fidelity & Social Validity

According to the results of the Fidelity Checklist/ Co-facilitator rating, the target of the program was achieved at a Moderately Well (80%) or above level for all stages and skills. And the facilitator skills were also rated at Moderately Well (80%) or above level on use of Positive Reinforcement, Specific Feedback, Appropriate Self-Disclosure, Empathy, Paraphrasing, Summarization and Reflection. The Social Validity questionnaire was voluntary, and as rated by participants (n=7) of the experimental group, indicated that all questions related to the utility of the program were rated above mid-point (2.5) by most participants on average. Most of the ARP skills were rated as useful by at least 50% of the survey respondents including, “Recognizing feelings in yourself and others”, “Empathy Skills”, “Relaxation Exercises”, “Deep Breathing and Mindfulness”, “Attention Training”, “Thinking Helpful Thoughts”, “Step Plan (breaking your fears into small steps)”, “5 Step Problem Solving Plan” , whereas only the skill set of “Thinking

about Role Models and Support Teams" and "Giving back to the community" was rated as not useful by more than 50% (4 participants).

# 4. Discussion

The assumption that educators and related professionals inherently possess socio-emotional competence to implement interventions and programs with their students, without equipping them with appropriate training, results in an unsustainable educational environment, especially in special needs services. Given this background, ARP grounded in cognitive-behavioral principles and positive psychology, and structured around building socio-emotional competence building, presents a viable intervention to address these gaps, by building skills particularly relevant to educators managing emotionally complex classroom environments. This study thus aimed to empirically evaluate the impact of the ARP on enhancing positive mental health (subjective wellbeing and self-efficacy) and reducing negative outcomes (burnout and turnover intention) among professionals in early childhood special needs education settings.

At baseline, the mean TIS-6 (see Table 2) score exceeded the recommended cutoff (Brothma & Roodt, 2012), indicating turnover intention as a major concern in this demographic. Burnout scores (see Table 2) for Overall, Personal, and Work-Related domains were also above the clinical threshold of 50 (Kristensen et al., 2005), while Client-Related Burnout was slightly lower (M = 45.09, SD = 19.11), possibly due to the high frequency reported on relevant staff training in special needs services (see Table 3; Behlol, 2011; Isave, 2017; Narea et al., 2022). Similarly General Self-Efficacy (see Table 2) scores were notably high (M = 32.36, SD = 5.10), exceeding both international norms (Scholz et al., 2002) and national university population norms (Shaheen et al., 2022; Muhammad et al., 2023), indicating that the targeted population had cultivated a belief in their ability to handle challenges and novel situations (Schwarzer & Jerusalem, 1993), possibly due to relevant professional trainings (see Table 3) resulting in the ability to handle student interaction (Behlol, 2011; Isave, 2017; Narea et al., 2022), as also indicated by client-related burnout being slightly lower than cutoff (see Table 2). While no normative data were available for COMOSWB to make similar interpretations. Through preliminary analysis baseline comparability between groups reduced concerns for confound (see Table 3, 4, 5, & 6).

Linear Mixed Model (LMM; see Table 7) analyses were used to assess intervention efficacy. For GSE the analysis revealed no significant effects of Group, Time, or Group × Time interaction ($\beta = 1.5$, $p = .392$). Baseline scores which are higher than the norm, and similar high points in terms of estimated marginal means for the Control group at pre-test and Experimental

group at post-test (both M = 33.07, SE = 1.18) suggest a ceiling effect or limited scale sensitivity for this application. Subjective Wellbeing (SWB) outcomes were partially supported. While Life Satisfaction and Positive Emotions showed no significant Group or interaction effects, Time was significant for Overall SWB (β = -3.07, $p$ = .021) and Positive Emotions (β = -1.5, $p$ = .040), indicating some general improvement compared to pretest scores. Although, Negative Emotions showed significant Group, Time, and interaction effects (β = -1.71, $p$ = .041), supported by a paired $t$-test (see Table 8) revealing a significant improvement in the Experimental group only (Mean Diff = 1.50, $d$ = -0.802), with no change in the Control group. Further the ARP significantly reduced Overall, Personal, and Work-Related Burnout (see Table 7). LMM showed significant effects for Group, Time, and their interaction across these domains. Post-test scores in the Experimental group fell below the clinical cutoff, while Control group scores increased slightly. These changes were supported by bivariate paired $t$-tests (see Table 8), indicating statistical significance only in the Experimental group. For Client-Related Burnout, only the Group effect was significant at post-test (β = 16.96, $p$ = .036), while Time and interaction effects were non-significant. Through EMM it is notable to see that both groups experienced a decrease in client related burnout across time, but the experimental group experienced a sharper decrease (see Table 7). Considering the high scores observed on GSE, this might be indicative of a thorough look into the possible impact of appropriate technical skills training as approximately 65% of the participants reported receiving trainings specific (see Table 3) to handling students with special needs (Behlol, 2011; Isave, 2017; Narea et al., 2022). Turnover Intention showed significant Group and interaction effects (β = -3.71, $p$ = .035), though Time was not significant (see Table 7). This suggests that while within-group changes were not independently significant, when the change across both groups is considered, it is apparent that the intervention buffered against the increasing trend on turnover intension observed in the Control group. Paired $t$-tests (see Table 8) confirmed no significant change within groups, further supporting the overall interaction effect, highlighting ARP's potential to mitigate rising turnover intention over time.

When evaluating the overall efficacy of the ARP, the intervention significantly reduced ill-being indicators, including Negative Emotional Experience, Overall Burnout, Personal Burnout, Work-Related Burnout, and Turnover Intention. However, no significant improvements were observed in wellbeing indicators such as General Self-Efficacy, Overall Subjective Wellbeing, Life Satisfaction, or Positive Emotions (see Table 7 & 8). Our results align with Cann et al. (2023),

who assert that well-being and ill-being are distinct constructs that may respond differently to intervention. While previous research supports the efficacy of multi-foci interventions in improving both, the present quasi-experimental study only observed an effect on ill-being. This trend parallels Games et al. (2019), who found significant reductions in Depression, Anxiety, and Stress, but not in Self-Esteem or Resilience scores, though they also report clinical improvements suggesting participants were better prepared to manage stress over time. Given that components of ARP such as building support networks, value-based decision making, and adopting healthier lifestyles may require sustained behavioral change, wellbeing gains may only be observable in long-term follow-ups (Barrett, 2011; Games et al., 2019). Moreover, the current sample reported high time demands (see Table 5), with an average of 1 hour and 40 minutes of daily overtime (SD = 1 hour 11 minute), potentially limiting their capacity to implement such changes in the short term.

The content (see Table 1) of the ARP Participant and Facilitator Booklet was rated by the author as easy to understand and convey. Given that most participants had formal education in psychology, session discussions often went beyond the official content. However, as the ARP Facilitator Manual encourages contextually relevant examples, these discussions were deemed appropriate. Many participants emphasized the theoretical underpinnings and rationale of each skill, which became a regular feature of group discussions. Session recordings were reviewed by a co-facilitator, who rated program fidelity and facilitator skills at 80% or above ("Moderately Well") using the ARP fidelity checklists. Social validity data showed that all utility-related items were rated above the mid-point (2.5 on a 0–5 scale), with most ARP skills rated as useful by at least 50% of respondents. Exceptions included "Thinking about Role Models and Support Teams," "Giving Back to the Community," and "Attention Training," which were rated as less useful by more than half or half of participants. Possible theoretical explanation for the low utility of these social skill sets might be explained by the high initial burnout experience. As indicated by Maslach & Jackson, (1984), elements of *Emotional Exhaustion*, *Depersonalization* (cynical pattern and detachment from personal relations), and *Reduced Personal Fulfillment* (perception of decreased self-competence), are a part of the emotional and cognitive experience of burnout. The individuals who are experiencing burnout and extensive daily overtime demands might feel too exhausted and detached to further invest in "Giving back to the community." Additionally, a perceived decrease in competence (Reduced Personal Fulfillment) as well as detachment from personal relations

(Depersonalization) might not align with the concept of self-chosen support networks, or reflecting on role models may not align with lived realities. Furthermore, Attention Training requires consistent practice, which might not provide immediate relief in a high-paced setting. Which again highlights the importance of a long-term follow-up to measure these changes.

The findings closely align with Jennings and Greenberg's (2009) Prosocial Classroom Model, emphasizing that increased emotional regulation decreases stress, positively influencing professional outcomes (significantly reduced Turnover and Burnout). However, the limited improvements in positive aspects like life satisfaction and self-efficacy may result from the ARP's primary focus on coping mechanisms. Additionally, cultural, and contextual constraints in Pakistan, such as inadequate institutional support, resource limitations, and prevailing educational pressures (Hafeez, 2020; UNICEF, 2021), could restrict the potential for holistic improvement.

This research carries significant implications at individual, institutional, and policy-making levels. Early childhood education is a crucial period for the development of cognitive, social, and emotional skills in all children (Narea et al., 2022). SEC training can potentially offer solution to reduce the burden on the special needs education sector in a country like Pakistan, which struggles to manage financial and professional resource, as evident by the lack of government level coherence in policy and approach towards the issue at hand (Hafeez, 2020) despite its international commitments to “Wellbeing in education” (OECD, 2019), “Equal Educational Opportunity for all” (SDG 4; United Nations, 2018). Programs developed to enhance Socio-Emotional Competency in students assumes professional’s readiness (Iizuka et al., 2014), despite being imported from a western model and often poorly adapted. In such a context of layered complexity, a thoroughly translated and adapted Adult Resilience Program (Urdu) addresses critical skill gaps for professional in emotional regulation and stress management, essential for sustainable professional practice in special needs education, and working with children with special needs. It has the potential to directly improve the wellbeing of professionals as well as indirectly enhance wellbeing in a diverse range of children (Jennings & Greenberg, 2009), potentially leading to a reduction in burden of disease eventually. This study also addresses the problem of scarcity of literature in special needs education and intervention studies in the context of Pakistan, filling existing gaps in empirical knowledge within Pakistani contexts, demonstrating effectiveness of culturally and contextually specific interventions. Institutionally integrating structured resilience training within professional development programs is strongly recommended, as it can potentially influence

policy to prioritize professional wellbeing, workload reduction, and holistic professional support systems, as well as help to gather evidence for practical approaches needed to enhance the environments of Special Needs Education Setups.

## 4.1 Limitations and Future Recommendations

Despite valuable insights, the study had limitations. The quasi-experimental design and small sample size restricted generalizability. A reliance of self-report measure in a professional work setting might have the potential for the participants to underreport measures such as Turnover Intention. Cicchetti, (2016) suggests use of an active control group instead of a waitlist control to distinguish effects of other factors from intervention effects. The short duration of intervention and follow-up limit the understanding of long-term sustainability of results. Uncontrolled confounding variables, such as fluctuating workloads, concurrent personal or professional development activities, i.e., supervision, and varying organizational support levels, might have influenced outcomes. The finding suggests that intervention did not enhance self-efficacy, positive emotional experiences, or life satisfaction, limiting its scope. Avola et al. (2025) emphasize the multifaceted barriers undermining intervention sustainability, including immediate occupational demands, inadequate institutional support, and the limited contextual transferability of practices. Although interventions such as mindfulness and professional development programs demonstrate positive outcomes, persistent heterogeneity in design, scope, and methodology complicates the identification of their most effective components. Additionally, the reliance on psychometric instruments with hypothetical cutoffs, in the absence of population-specific norms for Pakistan, restricts the validity of cross-contextual inferences.

Future research should address these limitations through larger randomized controlled trials, extended intervention durations, and follow-up assessments. Distinction between the effects of each strategy on the dependent variables should be established. Additionally, exploring organizational interventions concurrently with individual programs would help create supportive professional ecosystems. Investigating potential moderating variables like organizational culture, administrative support, and specific educator demographics could further refine targeted interventions and improve overall educator wellbeing and professional sustainability (Brown & Rohrer, 2020). Avola et al. (2025) also stresses the importance of methodological rigor and greater inclusion of qualitative methodologies to improve the effectiveness and sustainability of teacher

wellbeing interventions, and to capture the nuanced experiences of teachers and the complexity of wellbeing, such as a deeper understanding into the primary source of stressors for the professionals. Future studies might also evaluate the impact of educator's technical training related to special needs on their general self-efficacy and client-related burnout, as it exceeded the scope of this current study.

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