

The Effect of Positive Psychology on Enhancing Subjective Well-Being (Subjective Happiness/Life Satisfaction) in an Orphaned Adolescent Diagnosed with Comorbid Depression and Anxiety Disorders: A Case Report

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ABSTRACT

Objective: The present study aimed to investigate the effect of positive psychology on enhancing subjective well-being (subjective happiness/life satisfaction) in an orphaned adolescent diagnosed with comorbid depression and anxiety disorders.

Methods and Materials: The present study was a case report employing a single-subject design with three baseline assessments and a follow-up period. It examined the effects of seven sessions of a manualized positive psychology intervention (one 60-minute session per week) on reducing depression and anxiety and enhancing subjective well-being in a 15-year-old orphaned adolescent boy diagnosed with comorbid depression and anxiety disorders. The Depression-Anxiety Scale (DA-14) and the Subjective Well-Being Scale were used in the present study. The adolescent completed these measures before the intervention, after the seven positive psychology sessions, and one month after completion of the intervention.

Findings: The results indicated that following the initiation of the intervention, the adolescent boy demonstrated a decreasing and improving trend in depression (39.58% reduction) and anxiety (37.25% reduction) scores, as well as an increasing and improving trend in the total subjective well-being score (68%) and its dimensions, including subjective happiness (68.57%) and life satisfaction (67.50%). These improvements were maintained at the one-month follow-up.

Conclusion: Based on the findings, positive psychology may constitute an appropriate and effective intervention for enhancing subjective happiness, life satisfaction, and subjective well-being among orphaned adolescents with comorbid psychological disorders.

Keywords: positive psychology, subjective well-being, depression, anxiety, orphaned adolescent.

1. Introduction

Adolescence is a developmental period characterized by rapid biological, cognitive, emotional, and social changes, during which individuals are required to adapt to increasing interpersonal expectations, identity-related challenges, educational demands, and greater autonomy. Although these developmental transitions are normative, they can also heighten vulnerability to psychological distress, particularly when adolescents are simultaneously exposed to adverse life circumstances such as bereavement, family disruption, institutional care, social deprivation, or the absence of stable parental support. Among the most clinically important emotional difficulties during this period are depression and anxiety, which frequently emerge together and can substantially impair functioning, emotional regulation, social adaptation, educational performance, and perceived quality of life. Research has increasingly emphasized that adolescent mental health should not be conceptualized solely in terms of symptom reduction, because optimal adjustment also involves the presence of positive psychological functioning, including happiness, life satisfaction, resilience, hope, meaning, and subjective well-being (Krause et al., 2019; Melton et al., 2016; F. Wang et al., 2023).

Depression in adolescence is associated with persistent sadness, diminished interest or pleasure, negative self-appraisal, hopelessness, impaired concentration, interpersonal withdrawal, and disruptions in everyday functioning. Anxiety, in turn, may involve excessive worry, tension, physiological arousal, fear-related anticipation, avoidance, and a heightened perception of threat. Importantly, depressive and anxiety symptoms often overlap rather than occurring as entirely independent clinical phenomena. A systematic review of comorbid anxiety and depressive symptoms in children and adolescents has demonstrated the clinical significance of this co-occurrence and highlighted the need for interventions capable of targeting shared emotional and cognitive mechanisms across both symptom domains (Melton et al., 2016). Large-scale adolescent research has likewise shown that comorbid anxiety and depression are associated with a broader range of maladaptive and health-risk behaviors, suggesting that their simultaneous presence may indicate a more complex and burdensome pattern of psychological vulnerability (F. Wang et al., 2023). Because emotional disorders in adolescence may become persistent and interfere with

subsequent developmental trajectories, early identification and intervention are particularly important.

Accurate assessment of adolescent depression and anxiety is therefore a central component of clinical evaluation. The Depression Anxiety Stress Scales and related subscales have been widely used to assess negative emotional states, and psychometric investigations have supported their factorial and construct validity in different populations. Evidence from Iranian samples has also indicated acceptable psychometric properties for depression and anxiety assessment using these measures (Aazami et al., 2017; Asad Zandi et al., 2022). More broadly, the assessment of anxiety requires sensitivity to developmental context and psychometric adequacy, as demonstrated by Iranian research on anxiety measurement instruments (Mehrsafar, 2016). Contemporary adolescent psychiatry has also increasingly emphasized the importance of differential diagnosis when depressive symptoms are present, because some affective presentations may overlap with or precede other mood disorders; recent biomarker-oriented research reflects the continuing effort to improve diagnostic differentiation among adolescents with depressive presentations (Wu et al., 2022). These developments reinforce the importance of combining careful symptom assessment with a broader evaluation of positive psychological functioning.

The psychological burden of depression and anxiety may be especially pronounced among orphaned or parentally deprived adolescents. The loss of parents removes not only attachment figures but also important sources of emotional security, supervision, social learning, material support, and identity continuity. Adolescents living in orphanages, residential facilities, or unstable caregiving environments may experience cumulative stressors including grief, disrupted attachment, uncertainty about the future, social stigma, loneliness, financial insecurity, reduced access to consistent emotional support, and limited opportunities for individualized care. Research comparing orphan and non-orphan adolescents has shown that orphaned adolescents may experience higher levels of depression, anxiety, and stress and lower levels of psychological well-being (Duraismy et al., 2022). Similarly, studies conducted in orphan care settings have documented a considerable prevalence of depressive symptoms and have identified psychosocial factors that may contribute to emotional vulnerability among orphaned adolescents (Dargie, 2021). These findings indicate that orphanhood is not merely a social condition but may constitute a significant

psychological risk context requiring targeted preventive and therapeutic responses.

The emotional consequences of parental loss may also be intensified by traumatic experiences and instability. Research on vulnerable and homeless adolescents has shown that trauma exposure and disrupted family relationships are strongly linked to poorer mental health outcomes (Milburn et al., 2019). For orphaned adolescents, bereavement itself may be traumatic, particularly when parental death is sudden, violent, or unexpected. In such circumstances, depression and anxiety may coexist with feelings of abandonment, insecurity, helplessness, diminished trust, and concerns about belonging. The absence of stable caregiving can further restrict opportunities for emotional co-regulation and adaptive coping. Consequently, interventions for orphaned adolescents should ideally address not only psychopathological symptoms but also the restoration and strengthening of positive psychological resources that may have been weakened by loss and adversity.

This broader perspective is consistent with the development of positive psychology, which shifted part of the psychological sciences toward the systematic study of strengths, virtues, positive emotions, meaning, engagement, resilience, hope, and well-being. Rather than focusing exclusively on pathology and deficit, positive psychology seeks to understand and enhance the factors that enable individuals to function well despite adversity. The field has expanded substantially since its emergence, and bibliometric evidence indicates a marked increase in research on positive psychological constructs and interventions across diverse populations and settings (M. Wang et al., 2023). This growth reflects increasing recognition that mental health is not simply the absence of psychological symptoms but also includes the presence of positive functioning and subjective well-being. Accordingly, positive psychology interventions are designed to cultivate adaptive cognitive, emotional, and behavioral patterns through structured exercises such as gratitude, identifying and using personal strengths, savoring positive experiences, building hope, developing optimism, setting meaningful goals, and improving positive interpersonal responses.

Positive psychotherapy and related positive psychology interventions have increasingly been applied to clinical and subclinical populations. Contemporary positive psychotherapy emphasizes the identification and development of personal capacities and the reformulation of psychological conflicts in ways that promote balanced functioning and adaptive coping (Eryilmaz, 2025). Positive

psychology-based training has also been used to improve self-efficacy and reduce anxiety-related outcomes in educational contexts, suggesting that the approach may enhance both emotional regulation and adaptive functioning (Hajizadeh Anari & Miri, 2025). Likewise, a recent pilot psychoeducational program based on positive psychotherapy demonstrated the potential of strength-oriented approaches for enhancing resilience among young adults (Sari et al., 2025). These findings are theoretically important because resilience, hope, positive affect, and self-efficacy may function as protective resources that reduce the psychological impact of stressful experiences and support recovery following adversity.

Evidence also suggests that positive psychotherapy may improve important quality-of-life outcomes in individuals facing highly stressful occupational or medical circumstances. Positive psychotherapy has been reported to enhance quality of life, happiness, and meaningfulness among firefighters, a population frequently exposed to occupational stress and potentially traumatic experiences (Baghaei & Aghaei, 2025). In women with cancer, positive psychotherapy has similarly been associated with improved cognitive flexibility, reduced marital frustration, and greater post-traumatic growth (Rafiei et al., 2025). Furthermore, positive psychology training has been found to improve cognitive flexibility and psychological hardiness among nurses, indicating that the intervention may strengthen adaptive cognitive and personality-related resources under demanding conditions (Mirkamali et al., 2021). Although these populations differ from orphaned adolescents, the findings collectively support the proposition that positive psychological interventions can foster adaptive functioning when individuals face sustained stress, adversity, or emotional burden.

At the level of evidence synthesis, positive psychology interventions have shown promising effects on both psychological well-being and mental distress. A systematic review and meta-analysis of randomized controlled trials investigating multicomponent positive psychology interventions concluded that such interventions can contribute to improvements in well-being and reductions in psychological distress (Hendriks et al., 2020). Similarly, a meta-analysis specifically addressing positive psychology interventions for depression reported beneficial effects on depressive symptoms, providing empirical support for their use as adjunctive or stand-alone approaches in selected contexts (Pan et al., 2022). The broader psychotherapy literature continues to examine heterogeneity in treatment

effects for depression, underscoring the importance of understanding which interventions work, for whom, and under what conditions (Plessen et al., 2022). Accordingly, a positive psychology intervention may be particularly valuable when both symptom reduction and enhancement of positive functioning are considered relevant therapeutic goals.

The adolescent literature also provides support for the applicability of positive psychology interventions. A systematic review and meta-analysis of school-based multicomponent positive psychology interventions found that such programs can improve adolescent well-being while reducing psychological distress (Tejada-Gallardo et al., 2020). However, intervention effects may not be uniform across individuals. Research replicating positive psychology exercises among adolescents has shown that different exercises may produce different outcomes across participants, emphasizing the need to consider person-intervention fit and individual responsiveness (Khanna & Singh, 2019). This issue is particularly relevant in clinical case studies, in which the intervention can be examined in relation to the unique psychological and life circumstances of a specific adolescent rather than being interpreted solely through group-level averages.

Positive psychology approaches may be especially relevant to adolescents in foster or residential care. Iranian studies have reported favorable outcomes of positive interventions among foster-care or orphaned adolescent girls. Positive group interventions have been associated with improvements in psychological well-being, resilience, and happiness among foster-care adolescent girls (Honarmand Zadeh & Sajjadian, 2016). Positive thinking skills training has also been found to increase happiness and resilience among orphaned adolescent girls (Noferesti & Okhovati, 2019). More recently, both group and individual positive interventions have been compared for persistent depressive disorder among adolescent girls with foster-care or irresponsible-parenting backgrounds, providing further evidence that positive interventions can be adapted to adolescents experiencing compromised family support (Abiri Bonab et al., 2022). These findings are highly relevant because they suggest that strengths-based interventions may be feasible and beneficial even in populations characterized by significant psychosocial adversity.

One of the principal outcomes targeted by positive psychology is subjective well-being. Subjective well-being generally includes both affective and cognitive dimensions, with subjective happiness reflecting the individual's overall

experience of happiness and life satisfaction representing a global cognitive judgment of the quality of one's life. These constructs are clinically meaningful because individuals with similar levels of psychopathological symptoms may differ substantially in their perceived happiness, satisfaction, hopefulness, and sense of meaning. Research has shown that psychological resources such as mindfulness and resilience are related to life satisfaction and affective well-being, illustrating how adaptive internal capacities can contribute to subjective well-being (Bajaj & Pande, 2016). Thus, improvements in subjective well-being should be regarded as substantive therapeutic outcomes rather than merely secondary consequences of symptom reduction.

The relationship between depression and life satisfaction is particularly important during adolescence. Longitudinal research has demonstrated reciprocal associations between depressive symptoms and life satisfaction, indicating that higher depression may contribute to lower life satisfaction while lower life satisfaction may also increase vulnerability to subsequent depressive symptoms (Lee et al., 2022). This bidirectional relationship suggests that interventions targeting both depressive symptomatology and positive evaluations of life may interrupt a potentially self-reinforcing cycle. For orphaned adolescents, whose life circumstances may involve profound loss and discontinuity, strengthening the ability to identify positive experiences, develop meaningful goals, and experience satisfaction with life may be especially important for longer-term adaptation.

Subjective well-being is also shaped by broader behavioral and psychosocial mechanisms. For example, adolescent physical activity has been associated with depressive symptoms through psychosocial pathways, demonstrating that emotional functioning is influenced by multiple interconnected resources and behaviors rather than by isolated symptoms alone (Shen et al., 2022). Similarly, exercise-based interventions have been linked to improvements in psychological well-being in clinical populations, further supporting the broader principle that well-being can be actively enhanced through structured behavioral interventions (Hall et al., 2021). Although positive psychology is distinct from exercise-based approaches, both perspectives underscore a move toward interventions that actively build psychological functioning rather than focusing only on disorder-specific symptom control.

Positive psychology has also demonstrated potential for anxiety management. Research comparing positive psychology with mindfulness-oriented approaches among

athletes with disabilities found that positive psychology could contribute to the management of anxiety (Sohrabi, 2023). This is consistent with the proposition that cultivating positive emotions, strengths, and adaptive interpretations may counteract cognitive and emotional processes that sustain anxious states. In adolescents with comorbid anxiety and depression, interventions that simultaneously reduce negative affect and increase positive resources may be particularly useful because the two symptom domains frequently share processes such as rumination, avoidance, low self-efficacy, pessimistic expectations, and diminished engagement with rewarding experiences.

At the same time, the psychological needs of orphaned adolescents should be considered within the broader framework of resilience and adaptation following adversity. Positive psychological interventions may be especially suitable in this context because they do not require the individual to deny or minimize painful experiences; rather, they aim to expand psychological functioning by helping the person recognize strengths, cultivate gratitude, identify meaningful goals, increase positive emotional experiences, and build constructive relationships. Such mechanisms may be particularly valuable following bereavement because they offer a framework through which an adolescent can gradually reconstruct a sense of agency and future orientation. The demonstrated benefits of positive interventions for resilience, happiness, hardiness, and psychological well-being across foster-care adolescents and other vulnerable populations provide a coherent empirical basis for testing this approach in an orphaned adolescent with concurrent depression and anxiety (Honarmand Zadeh & Sajjadian, 2016; Mirkamali et al., 2021; Noferesti & Okhovati, 2019; Sari et al., 2025).

Despite the expanding evidence base, several gaps remain. Much of the literature on positive psychology interventions relies on group designs, school-based programs, adult clinical samples, or adolescent populations without severe family adversity. Although group-level evidence is essential for estimating average treatment effects, it may not fully capture the therapeutic process in complex cases involving bereavement, institutional care, and psychiatric comorbidity. Single-case methodology can therefore provide clinically meaningful information regarding the direction, magnitude, and maintenance of change within an individual across baseline, intervention, and follow-up phases. Such designs are particularly useful for documenting whether improvements occur consistently after intervention onset and whether positive changes are

retained over time. Moreover, the inclusion of both symptom-focused outcomes, such as depression and anxiety, and positive outcomes, such as subjective happiness, life satisfaction, and overall subjective well-being, allows for a more comprehensive evaluation of psychological change.

The present case is also relevant because positive psychology interventions have been studied more frequently among orphaned girls than orphaned boys in the Iranian literature, while less attention has been directed toward adolescents experiencing the simultaneous burden of parental loss and comorbid depression and anxiety. In addition, the available literature demonstrates the value of considering multiple outcome domains in adolescent depression research rather than focusing exclusively on symptom counts (Krause et al., 2019). A clinically meaningful intervention should ideally produce not only reductions in negative emotional symptoms but also gains in positive functioning that are observable and sustained beyond the end of treatment. Given the evidence supporting positive psychology for depression, anxiety, resilience, happiness, psychological well-being, quality of life, cognitive flexibility, and meaningfulness across diverse populations (Baghaei & Aghaei, 2025; Hendriks et al., 2020; Pan et al., 2022; Rafiei et al., 2025), evaluating its application in a highly vulnerable adolescent case may provide useful preliminary evidence for future clinical practice and research.

Accordingly, the aim of the present study was to investigate the effect of a positive psychology intervention on reducing depression and anxiety and enhancing subjective well-being, subjective happiness, and life satisfaction in an orphaned adolescent diagnosed with comorbid depression and anxiety disorders.

2. Methods and Materials

2.1. Study Design and Participants

The present study employed a single-case experimental design to investigate the effectiveness of a positive psychology intervention in improving subjective well-being, including subjective happiness and life satisfaction, in an orphaned adolescent with comorbid depression and anxiety disorders. The participant was a 15-year-old boy enrolled in lower secondary school. He had lost both parents in separate road traffic accidents at the age of 14. His grandparents were also deceased, and no family member was available to assume legal or practical responsibility for his care. Consequently, through coordination with social welfare

services, he was placed in a residential care center for orphaned adolescents in Jolfa, Iran. In 2023, because of persistent symptoms of depression and anxiety, he sought assistance from his school counseling center and was subsequently referred by the school counselor to the Emrooz Behtar Psychology and Counseling Clinic in Jolfa for further psychological assessment and intervention. Before the intervention, the Depression-Anxiety Scale (DA-14) and the subjective well-being measures were administered to confirm the severity of depressive and anxiety symptoms and to establish the participant's baseline level of subjective well-being. The study followed a single-subject design with three baseline assessments, an intervention phase, and a one-month follow-up assessment. The positive psychology intervention consisted of seven weekly 60-minute individual sessions. Outcome measures were administered during the baseline phase, after completion of the seven intervention sessions, and again one month after the intervention to evaluate both immediate therapeutic change and maintenance of treatment effects.

2.2. Instruments

Depressive and anxiety symptoms were assessed using the Depression-Anxiety Scale (DA-14), derived from the Depression Anxiety Stress Scales originally developed by Lovibond and Lovibond in 1995. The original DASS consists of 21 items assessing depression, anxiety, and stress, with seven items allocated to each dimension. Because the present study specifically focused on depression and anxiety, only the 14 items corresponding to these two subscales were administered. Each item is scored on a four-point Likert scale ranging from 0, indicating that the statement did not apply to the respondent at all, to 3, indicating that it applied to the respondent very much or most of the time. The scores for each seven-item subscale are summed and multiplied by two, yielding a possible score ranging from 0 to 42 for both depression and anxiety. Scores may be classified into normal, mild, moderate, severe, and extremely severe levels. Previous research in Iran has reported acceptable reliability coefficients for the depression and anxiety dimensions, including coefficients of .70 and .66, respectively, in the general population of Mashhad (Asad Zandi et al., 2022). Evidence for the construct validity of the instrument has also been provided through significant negative correlations with the short form of Ryff's Psychological Well-Being Scale (Aazami et al., 2017). Subjective well-being was operationalized as the combined

scores of subjective happiness and satisfaction with life. Subjective happiness was assessed using the four-item Subjective Happiness Scale developed by Lyubomirsky and Lepper (1999). Each item is rated on a seven-point response scale, with response anchors varying according to the content of the item. The first two items require respondents to evaluate their happiness in absolute terms and relative to peers, whereas the remaining two items present brief descriptions of happy and unhappy individuals and ask respondents to indicate the extent to which those descriptions characterize them. The total score ranges from 4 to 28, with a score of 16 considered the interpretive midpoint or cutoff used in the present study. Lyubomirsky and Lepper (1999) reported high internal consistency across different samples, test-retest reliability coefficients ranging from .85 to .95, and satisfactory convergent and discriminant validity. In Iran, Aqa Babaii et al. (2012) reported a Cronbach's alpha coefficient of .76 and confirmed its content validity through expert evaluation. Life satisfaction was assessed using the five-item Satisfaction With Life Scale, designed to measure global cognitive judgments of one's satisfaction with life rather than positive or negative affect. Participants indicate their agreement with each statement on a seven-point Likert scale ranging from 1, strongly disagree, to 7, strongly agree. Total scores range from 5 to 35, with 20 considered the interpretive midpoint or cutoff in the present study. Diener (2009) reported a Cronbach's alpha coefficient of .87 for this measure. In Iran, Bayani et al. (2007) reported an internal consistency coefficient of .83 and a test-retest reliability coefficient of .69, while construct validity was supported through associations with the Oxford Happiness Questionnaire and the Beck Depression Inventory (Argyle, 2013; Beck et al., 1992). For the purposes of the present study, the scores of the Subjective Happiness Scale and Satisfaction With Life Scale were combined to obtain an overall subjective well-being score ranging from 9 to 63, with 36 serving as the interpretive midpoint.

2.3. Intervention

The intervention was based on the positive psychology approach developed by Seligman et al. (2005) and was delivered individually in seven weekly 60-minute sessions. Each session focused on a specific positive psychological construct and included discussion, experiential exercises, and between-session activities. The first session focused on identifying personal strengths and helping the adolescent recognize ways in which these strengths could be applied in

everyday life. He was also asked to record three positive events that occurred in his life. The second session addressed the role of positive emotions in reducing depressed and anxious mood and introduced gratitude as a strategy for enhancing well-being. Positive and negative memories were discussed, and the adolescent was asked to write a gratitude letter to a friend toward whom he felt appreciative or indebted. The third session focused on savoring and increasing awareness of positive experiences in the present moment. The adolescent was encouraged to pay deliberate attention to pleasurable experiences and to develop greater engagement with the here and now. The fourth session addressed interpersonal functioning by teaching active-constructive responding and strategies for strengthening relationships with others. The fifth session focused on hope, future orientation, and goal setting. Discussion centered on the personality characteristics and personal values that the adolescent hoped significant others would attribute to him in the future, thereby facilitating the development of personally meaningful goals. The sixth session focused on personal strengths, virtues, and positive moral characteristics. The adolescent was encouraged to identify these capacities and intentionally use selected strengths in new ways in his daily life. The seventh session emphasized positive emotions, particularly hope and optimism, and included a review and integration of the content of previous sessions. The adolescent practiced reframing adverse experiences through the perspective that the closure of one opportunity may be accompanied by the emergence of another, while recognizing that excessive attention to loss may prevent awareness of new possibilities. Before initiation of the intervention, the DA-14 and subjective well-being measures were completed at the counseling clinic to establish baseline functioning. The same measures were subsequently administered after the seventh session and at the one-month follow-up to determine changes in depression, anxiety, subjective happiness, life satisfaction, and overall subjective well-being and to assess whether improvements were maintained over time.

2.4. Data analysis

Because the study used a single-case experimental design, treatment effects were evaluated primarily through within-participant comparisons across the baseline, intervention, post-intervention, and follow-up phases rather than through conventional between-group inferential statistics. Visual inspection of score changes across

assessment points was supplemented by the Percentage of Non-Overlapping Data (PND), a commonly used nonparametric index for evaluating intervention effects in single-case research. PND was calculated by determining the proportion of intervention-phase observations that showed improvement beyond the most favorable baseline observation, with the direction of improvement defined as lower scores for depression and anxiety and higher scores for subjective happiness, life satisfaction, and overall subjective well-being. In addition, an effect-size index based on the magnitude of mean change relative to the baseline phase was calculated to quantify the degree of improvement following the positive psychology intervention. Percentage change from baseline was also considered when interpreting changes in the major outcome variables. Maintenance of treatment effects was examined by comparing post-intervention improvements with scores obtained at the one-month follow-up. The combined use of visual analysis, non-overlap indices, and baseline-referenced effect-size estimates was intended to provide a clinically interpretable assessment of both the magnitude and stability of change in this single participant.

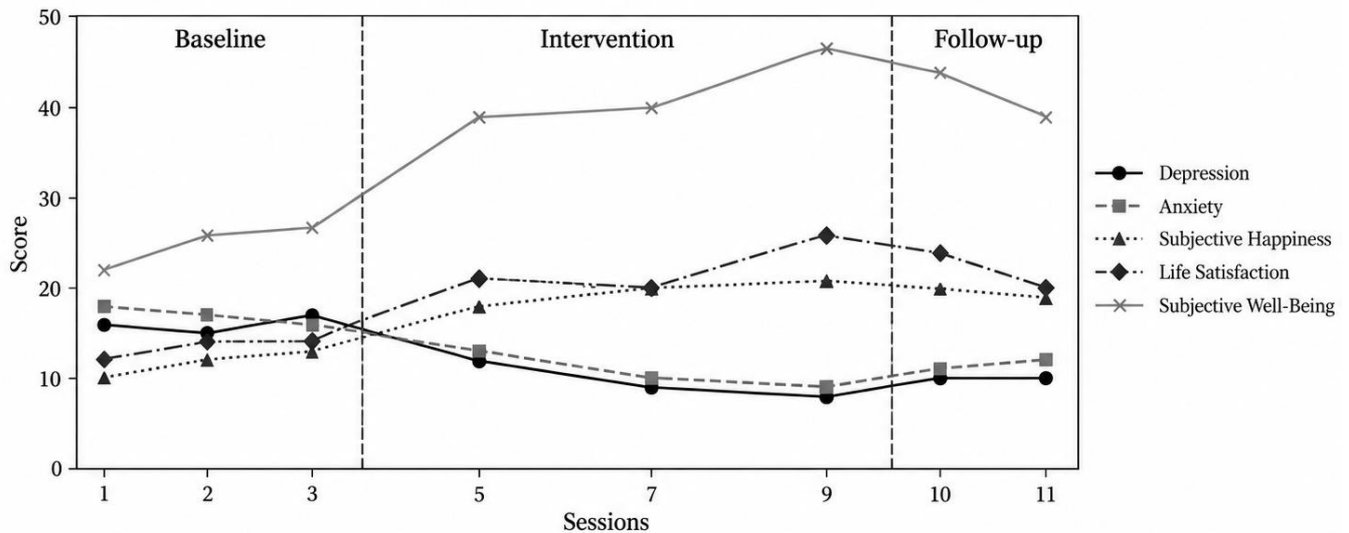
3. Findings and Results

The participant's scores on the depression and anxiety variables during the baseline, treatment, and follow-up phases are presented in Figure 1. As shown in the figure, the participant's levels of depression and anxiety remained relatively stable during the baseline phase. However, with the initiation of the intervention sessions, a decreasing trend was observed in both depression and anxiety. During the follow-up phase, although the scores showed a slight increase compared with the final treatment sessions, they remained lower than the baseline levels. The Percentage of Non-Overlapping Data (PND) was 100% for both depression and anxiety. In other words, all scores obtained during the treatment and follow-up phases were lower than the lowest score recorded during the baseline phase. A higher percentage of non-overlapping data indicates greater intervention effectiveness for the participant. According to the information presented in Table 1, the effect size, or percentage of change, for depression was -39.58% at the end of the intervention sessions and -37.50% at the end of the follow-up phase. Similarly, the effect size, or percentage of change, for anxiety was -37.25% at the end of the intervention sessions and -32.35% at the end of the follow-up phase. These findings indicate that positive psychology

training was effective in reducing depression and anxiety in the orphaned adolescent.

Figure 1

Participant's Scores During the Baseline, Treatment, and Follow-Up Phases



The participant's scores on subjective well-being, subjective happiness, and life satisfaction during the baseline, treatment, and follow-up phases are presented in Figure 2. As shown in the figure, the participant's levels of subjective well-being, subjective happiness, and life satisfaction remained relatively stable during the baseline phase. However, with the initiation of the intervention sessions, an increasing trend was observed in subjective well-being, subjective happiness, and life satisfaction. During the follow-up phase, although a slight decrease was observed compared with the final treatment sessions, the scores remained higher than the baseline levels. The Percentage of Non-Overlapping Data (PND) was 100% for all three variables, including subjective well-being, subjective happiness, and life satisfaction. In other words, all scores obtained during the treatment and follow-up phases

were higher than the highest score recorded during the baseline phase. A higher percentage of non-overlapping data indicates greater effectiveness of the intervention for the participant. According to the information presented in Table 1, the effect size, or percentage of change, for subjective happiness was 68.57% at the end of the intervention sessions and 67.14% at the end of the follow-up phase. The effect size, or percentage of change, for life satisfaction was 67.50% at the end of the intervention sessions and 65.00% at the end of the follow-up phase. Moreover, the effect size, or percentage of change, for subjective well-being was 68.00% at the end of the intervention sessions and 66.00% at the end of the follow-up phase. These findings indicate that positive psychology training was effective in increasing subjective well-being, subjective happiness, and life satisfaction in the orphaned adolescent.

Table 1

Participant's Scores and Percentage Changes in the Study Variables During the Baseline, Treatment, and Follow-Up Phases

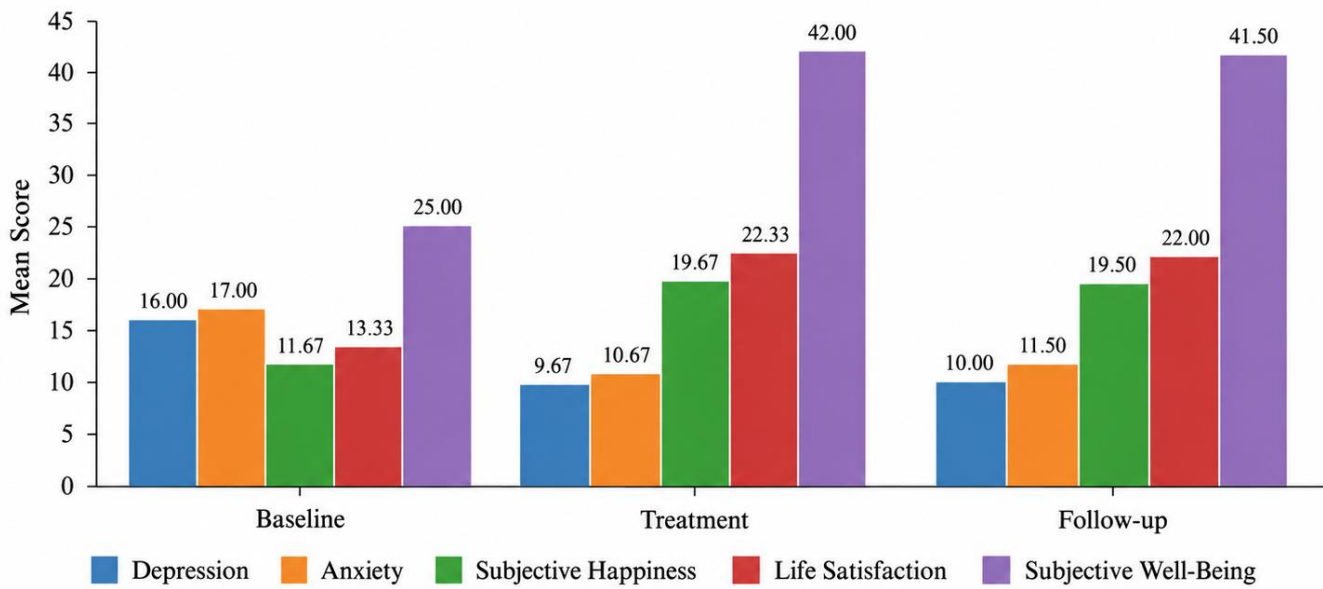
Variables	Baseline	Treatment	Follow-Up	Treatment Effect Size (%)	Follow-Up Effect Size (%)
Depression	16.00	9.67	10.00	-39.58	-37.50
Anxiety	17.00	10.67	11.50	-37.25	-32.35
Subjective Happiness	11.67	19.67	19.50	68.57	67.14
Life Satisfaction	13.33	22.33	22.00	67.50	65.00
Subjective Well-Being	25.00	42.00	41.50	68.00	66.00

The participant's mean scores on depression, anxiety, subjective well-being, subjective happiness, and life satisfaction during the baseline, treatment, and follow-up phases are presented in Figures 3 through 7. As shown in the figures, the mean scores for depression and anxiety

decreased during the intervention and follow-up phases compared with the baseline phase. In contrast, the mean scores for subjective well-being, subjective happiness, and life satisfaction increased during the intervention and follow-up phases relative to baseline.

Figure 2

Participant's Mean Scores During the Baseline, Treatment, and Follow-Up Phases



4. Discussion

The present case study examined the effectiveness of a positive psychology intervention in reducing depression and anxiety and improving subjective well-being, subjective happiness, and life satisfaction in a 15-year-old orphaned adolescent with comorbid depressive and anxiety symptoms. The findings indicated a clear pattern of improvement following the initiation of the intervention. Depression decreased from a baseline mean of 16.00 to 9.67 during treatment and remained lower than baseline at 10.00 during follow-up. Anxiety also decreased from a baseline mean of 17.00 to 10.67 during treatment and remained reduced at 11.50 during follow-up. The Percentage of Non-Overlapping Data was 100% for both depression and anxiety, indicating that all treatment and follow-up observations were more favorable than the most favorable baseline observation. The percentage of change for depression was -39.58% at the end of treatment and -37.50% at follow-up, while anxiety decreased by -37.25% at the end of treatment and -32.35% at follow-up. These findings suggest that the positive psychology intervention

was associated with a substantial reduction in negative emotional symptoms and that most of these gains were maintained one month after the intervention ended.

The reduction in depressive symptoms observed in this study is consistent with previous evidence indicating that positive psychology interventions can be effective in alleviating depression. A meta-analysis of positive psychology interventions for depression showed that such interventions can reduce depressive symptoms through mechanisms that extend beyond traditional symptom-focused approaches (Pan et al., 2022). Similarly, a systematic review and meta-analysis of multicomponent positive psychology interventions demonstrated beneficial effects on psychological distress as well as positive functioning (Hendriks et al., 2020). The present findings extend these observations to an orphaned adolescent with comorbid depression and anxiety, a context in which cumulative psychosocial adversity may complicate emotional recovery. The case also aligns with evidence from foster-care populations showing that positive interventions may be effective in reducing persistent depressive symptoms in adolescents with limited or disrupted parental support

(Abiri Bonab et al., 2022). Taken together, these studies support the view that positive psychology can be clinically useful not only for enhancing well-being but also for reducing depressive symptomatology in vulnerable youth.

The decrease in anxiety is also theoretically and empirically plausible. Positive psychology interventions emphasize strengths recognition, positive emotion generation, gratitude, hope, optimism, savoring, constructive responding, and meaningful goal setting. These components may reduce anxiety by weakening habitual threat-focused attention, increasing perceived coping resources, and promoting a more flexible and hopeful interpretation of future events. Previous research has shown that positive psychology-based training can improve anxiety-related outcomes in different populations. For example, positive psychology training has demonstrated effectiveness in reducing teaching anxiety among student-teachers (Hajizadeh Anari & Miri, 2025), while positive psychology has also been shown to contribute to anxiety management among athletes with disabilities (Sohrabi, 2023). The present findings therefore support the applicability of positive psychology to anxiety reduction, even when anxiety occurs alongside depressive symptoms rather than as an isolated problem.

The co-occurrence of depression and anxiety in adolescence is clinically important because comorbidity often indicates greater emotional burden and more complex impairment than either condition alone. Systematic evidence has shown that depressive and anxiety symptoms frequently overlap in children and adolescents and that their co-occurrence requires attention to common underlying processes (Melton et al., 2016). Research among adolescents has also linked comorbid anxiety and depression with a broader range of health-risk behaviors and psychosocial difficulties (F. Wang et al., 2023). The present intervention may have been beneficial precisely because it did not focus narrowly on one diagnostic category. Instead, it targeted transdiagnostic resources such as hope, optimism, strengths, positive affect, gratitude, and interpersonal functioning. This broader orientation may have addressed processes relevant to both depressive and anxious symptomatology.

The participant's orphanhood and residential care context may have further intensified his vulnerability to emotional problems. Prior research has documented higher levels of depression, anxiety, and stress and lower levels of psychological well-being among orphaned compared with non-orphaned adolescents (Duraisamy et al., 2022). Studies of adolescents living in orphan-care settings have also

reported a considerable burden of depressive symptoms (Dargie, 2021). In addition, trauma exposure, family disruption, and unstable caregiving environments have been associated with poorer mental health among vulnerable adolescents (Milburn et al., 2019). From this perspective, the participant's psychological difficulties were likely embedded in a broader context of bereavement, disrupted attachment, loss of parental security, and institutional living. The observed improvements may therefore reflect the usefulness of interventions that actively cultivate internal psychological resources in young people who have experienced major disruptions in family support.

A second major finding was the substantial improvement in positive psychological outcomes. Subjective happiness increased from a baseline mean of 11.67 to 19.67 during treatment and remained high at 19.50 during follow-up. Life satisfaction increased from 13.33 at baseline to 22.33 during treatment and remained at 22.00 at follow-up. Overall subjective well-being increased from 25.00 at baseline to 42.00 during treatment and remained at 41.50 at follow-up. The Percentage of Non-Overlapping Data was 100% for all three positive outcomes. The percentage of change at the end of treatment was 68.57% for subjective happiness, 67.50% for life satisfaction, and 68.00% for subjective well-being. At follow-up, the corresponding improvements remained 67.14%, 65.00%, and 66.00%, respectively. These changes indicate that the intervention was associated not merely with symptom reduction but with a marked enhancement of positive psychological functioning.

The improvement in subjective happiness is consistent with earlier research involving adolescents in foster-care and orphan settings. Positive group interventions have been shown to increase happiness, resilience, and psychological well-being among foster-care adolescent girls (Honarmand Zadeh & Sajjadian, 2016). Similarly, positive thinking skills training has been reported to enhance happiness and resilience among orphaned adolescent girls (Nofaresti & Okhovati, 2019). The present case extends these findings to a male orphaned adolescent and suggests that the benefits of positive psychology may generalize across gender and intervention format. The intervention components used in this case, particularly identifying strengths, recording positive experiences, practicing gratitude, savoring the present, and cultivating hope and optimism, are all conceptually consistent with mechanisms that could directly increase subjective happiness.

The observed increase in life satisfaction can also be interpreted within the broader literature on subjective well-

being. Life satisfaction represents a global cognitive evaluation of one's life circumstances and is distinct from momentary emotional states. Research has demonstrated a reciprocal relationship between depressive symptoms and life satisfaction in adolescents, with higher depression predicting lower life satisfaction and lower life satisfaction potentially increasing vulnerability to future depressive symptoms (Lee et al., 2022). Therefore, the simultaneous reduction in depression and increase in life satisfaction observed in this study may reflect mutually reinforcing therapeutic processes. As depressive symptoms declined, the participant may have become more able to recognize positive experiences and evaluate his life more favorably; at the same time, increased satisfaction with life may have reduced feelings of hopelessness and emotional distress.

The findings are also compatible with evidence that resilience and mindfulness-related processes contribute to subjective well-being. Resilience has been shown to mediate the relationship between mindfulness and both life satisfaction and affective well-being (Bajaj & Pande, 2016). Although the present intervention was not a mindfulness intervention, several of its components, including attention to positive experiences in the present moment and savoring, may have promoted greater awareness of adaptive experiences. Moreover, hope, optimism, and strengths use may have functioned as resilience-building mechanisms, helping the adolescent develop a more adaptive interpretation of adversity and a stronger sense of personal agency.

The marked improvement in overall subjective well-being is particularly important because positive psychology conceptualizes mental health as more than the absence of disorder. Positive functioning includes the presence of happiness, meaning, engagement, hope, and life satisfaction. The rapid growth of positive psychology research reflects increasing recognition of these constructs as legitimate psychological outcomes rather than secondary by-products of symptom reduction (M. Wang et al., 2023). The present case supports this conceptualization because the participant showed changes in both directions: depression and anxiety decreased while subjective happiness, life satisfaction, and overall well-being increased. This dual pattern suggests a broader shift in psychological functioning rather than a narrowly symptomatic effect.

The results are also consistent with findings from multicomponent positive psychology interventions in adolescents. School-based positive psychology programs have been found to improve well-being while reducing

psychological distress (Tejada-Gallardo et al., 2020). Similarly, multicomponent interventions have shown overall efficacy in improving psychological well-being and reducing distress across randomized controlled trials (Hendriks et al., 2020). The intervention in the present study included multiple active elements rather than a single exercise, which may have contributed to its effectiveness. The adolescent practiced strengths identification, gratitude, positive emotion generation, savoring, active-constructive responding, goal setting, optimism, and novel use of personal strengths. The cumulative effect of these components may have enhanced several interrelated psychological processes simultaneously.

The importance of a multicomponent approach is also supported by research suggesting that individual positive psychology exercises may not work equally well for all adolescents (Khanna & Singh, 2019). Some individuals may respond more strongly to gratitude, others to strengths use, goal setting, or interpersonal exercises. By combining several techniques, the present intervention may have increased the likelihood that at least some components matched the adolescent's psychological needs and preferences. This is particularly relevant in single-case work, where person-intervention fit may be more important than average effects observed in large samples.

The findings may additionally be understood through the lens of cognitive flexibility and psychological hardiness. Positive psychology training has been shown to improve cognitive flexibility and hardiness in demanding occupational settings (Mirkamali et al., 2021). Positive psychotherapy has also been associated with improvements in cognitive flexibility and post-traumatic growth in individuals exposed to severe life stressors (Rafiei et al., 2025). In the present case, the adolescent was encouraged to reinterpret adverse events, identify strengths, consider alternative future possibilities, and focus on hope and optimism. These practices may have reduced rigid negative thinking and supported more adaptive cognitive processing. Such change would be expected to influence both depressive and anxious symptoms while simultaneously increasing well-being.

The intervention's emphasis on meaning and positive future orientation may also have contributed to the observed outcomes. Positive psychotherapy has been shown to enhance meaningfulness and quality of life in individuals exposed to demanding and stressful circumstances (Baghaei & Aghaei, 2025). Contemporary positive psychotherapy approaches also emphasize the formulation of basic conflicts

and the mobilization of positive capacities in the service of adaptation (Eryilmaz, 2025). For an adolescent who had experienced parental loss and lacked stable family support, strengthening personal meaning, future goals, and positive identity-related attributes may have been particularly salient. The fifth session, which focused on desired future characteristics and values, may have helped the participant shift attention from loss and helplessness toward a more coherent and hopeful personal future.

The results also align with the broader concept of resilience. A recent positive psychotherapy-based psychoeducation program demonstrated that strengths-oriented intervention can enhance resilience among young adults (Sari et al., 2025). Although resilience was not directly measured in the present study, the pattern of maintained improvement at follow-up suggests that the adolescent may have developed psychological resources that persisted beyond the active intervention phase. The fact that depressive and anxiety scores increased only slightly after treatment while subjective well-being remained substantially above baseline supports the possibility that the intervention produced more durable changes than short-term mood fluctuation alone.

The modest attenuation of gains at follow-up should also be considered. Depression increased from 9.67 during treatment to 10.00 at follow-up, anxiety from 10.67 to 11.50, subjective happiness decreased from 19.67 to 19.50, life satisfaction from 22.33 to 22.00, and subjective well-being from 42.00 to 41.50. However, these changes were small, and all follow-up scores remained clearly more favorable than baseline values. This pattern is clinically meaningful because some reduction in treatment gains after structured sessions end is common. The persistence of substantial improvement one month later suggests that the intervention effects were not limited to the immediate treatment period.

The present findings should also be interpreted in light of research emphasizing the importance of measuring multiple outcomes in adolescent depression. Adolescent mental health research has increasingly questioned whether symptom reduction alone adequately captures meaningful clinical improvement (Krause et al., 2019). The current study addressed this issue by assessing both negative symptoms and positive psychological outcomes. This broader evaluation revealed that the participant not only became less depressed and anxious but also became happier, more satisfied with life, and higher in overall subjective well-being. Such multidimensional change may provide a more clinically informative picture of recovery.

5. Conclusion

Overall, the findings should not be interpreted as evidence that positive psychology is universally sufficient for all adolescents with comorbid depression and anxiety. The psychotherapy literature continues to emphasize variability in treatment response and the need to examine which interventions work best for specific individuals and circumstances (Plessen et al., 2022). In addition, diagnostic evaluation remains important, especially in adolescents with depressive presentations, because differential diagnostic issues may complicate treatment planning (Wu et al., 2022). Nevertheless, the present case provides preliminary evidence that a brief, structured positive psychology intervention may be a useful component of care for an orphaned adolescent with comorbid emotional symptoms.

6. Limitations & Suggestions

The present study has several limitations that should be considered when interpreting the findings. First, the study involved only one adolescent, which substantially limits generalizability to other orphaned adolescents, adolescents in foster care, or young people with different clinical characteristics. Second, the single-case design did not include a control condition, making it impossible to completely rule out alternative explanations such as spontaneous improvement, regression to the mean, nonspecific therapeutic attention, or changes in the participant's living environment. Third, the follow-up period was limited to one month, and therefore the long-term stability of the observed improvements remains unknown. Fourth, all major outcomes were based on self-report measures, which may be influenced by response bias, social desirability, mood at the time of assessment, or the participant's interpretation of questionnaire items. Fifth, no independent diagnostic interview, parent report, caregiver report, teacher report, or clinician-rated outcome measure was included. Finally, because the intervention contained multiple positive psychology components, the study cannot determine which specific elements were most responsible for the observed changes.

Future studies should replicate these findings using larger samples of orphaned and foster-care adolescents and should include both male and female participants across different age groups and residential contexts. Randomized controlled trials and multiple-baseline single-case designs across participants would provide stronger evidence regarding causal effectiveness. Future research should also use longer

follow-up periods, such as three, six, and twelve months, to determine whether improvements are maintained over time. Incorporating clinician-rated measures, structured diagnostic interviews, caregiver reports, and behavioral indicators would strengthen outcome assessment. It would also be useful to examine potential mediators and moderators of treatment response, including resilience, hope, optimism, cognitive flexibility, emotion regulation, perceived social support, grief severity, and therapeutic alliance. Component-analysis studies could further identify which positive psychology exercises are most effective for adolescents with comorbid depression and anxiety and whether intervention effects differ according to gender, severity of parental loss, duration of institutional care, or baseline psychological functioning.

In clinical and residential care settings, mental health professionals may consider incorporating structured positive psychology exercises into psychological services for orphaned adolescents, particularly when depressive and anxiety symptoms coexist with low happiness and life satisfaction. Interventions can include systematic strengths identification, gratitude exercises, savoring positive experiences, goal setting, hope enhancement, optimism training, and active-constructive responding in relationships. These techniques should be adapted to the adolescent's developmental level, personal history, cultural background, and current living circumstances rather than delivered in a rigid manner. Practitioners should also integrate positive psychology with routine clinical assessment and monitor both symptom reduction and positive functioning. In residential care centers, staff may support treatment by creating opportunities for adolescents to use personal strengths, participate in meaningful activities, receive consistent positive feedback, and develop supportive peer and adult relationships. Booster sessions after the initial intervention may also help maintain gains and reduce the small decline that can occur after treatment ends.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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All authors equally contributed in this article.

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References

- Aazami, Y., Khanjani, M., & Sader, M. M. (2017). Confirmatory Factor Structure of Depression, Anxiety and Stress Scale in Students. *Journal of Mazandaran University of Medical Sciences*, 27(154), 94-106. <http://jmums.mazums.ac.ir/article-1-9617-en.html>
- Abiri Bonab, F., Alivandi Vafa, M., Khademi, A., & Javanmard, G. (2022). The Comparison of the Effectiveness of Positive Group and Individual Intervention on the Persistent Depressive Disorder in Foster Care/Irresponsible Parenting Adolescent Girls. *Women and Family Studies*, 15(57), 135-151. <https://doi.org/10.30495/jwsf.2022.1926879.1553>
- Asad Zandi, M., Sayari, R., Ebadi, A., & Sanainasab, H. (2022). Abundance of Depression, Anxiety and Stress in Militant Nurses. *Journal of Military Medicine*, 13(2), 103-108. https://militarymedj.bmsu.ac.ir/article_1000444_8118526ba601ed0e183bd1b28e11ef4a.pdf
- Baghaei, B., & Aghaei, A. (2025). Effectiveness of Positive Psychotherapy on Quality of Life, Happiness, and Meaningfulness in Firefighters. *Bi-Monthly Journal of Health Dawn in Yazd*, 1(2), 1-16. <https://doi.org/10.18502/tbj.v2i2.10337>
- Bajaj, B., & Pande, N. (2016). Mediating Role of Resilience in the Impact of Mindfulness on Life Satisfaction and Affect as Indices of Subjective Well-Being. *Personality and individual differences*, 93, 63-67.
- Dargie, F. (2021). *Prevalence of Depression and Its Associated Factor among Orphan Adolescents in Orphan Centers in Hawassa City Administration, Sidama National Regional State, Ethiopia* [Thesis,

- Duraisamy, P., Raman, R., Kashyap, R. S., Dm, K., & Tn, M. (2022). A Comparative Study on Depression, Anxiety, Stress, and Psychological Wellbeing among Orphan and Non-Orphan Adolescents. *International Journal of Health and Allied Sciences*, 11(3), 6.
- Eryilmaz, A. (2025). Positive Psychotherapy in action: the "DYNAMICS" method for formulating basic conflicts. *The Global Psychotherapist*, 5(1), 101–114. <https://doi.org/10.52982/lkj263>
- Hajizadeh Anari, M., & Miri, M. N. (2025). Comparing the Effectiveness of Positive Psychology Training and Mindfulness-Based Cognitive Therapy on Self-Efficacy and Teaching Anxiety of Physics Student-Teachers. *Psychological Sciences*, 24(152), 81-100.
- Hall, M., Dobson, F., Van Ginckel, A., Nelligan, R. K., Collins, N. J., Smith, M. D., Ross, M. H., Smits, E., & Bennell, K. L. (2021). *Comparative Effectiveness of Exercise Programs for Psychological Well-Being in Knee Osteoarthritis: A Systematic Review and Network Meta-Analysis* Seminars in Arthritis and Rheumatism,
- Hendriks, T., Schotanus-Dijkstra, M., Hassankhan, A., de Jong, J., & Bohlmeijer, E. (2020). The Efficacy of Multi-Component Positive Psychology Interventions: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Journal of Happiness Studies*, 21(1), 357-390. <https://doi.org/10.1007/s10902-019-00082-1>
- Honarmand Zadeh, R., & Sajjadian, I. (2016). Effectiveness of Positive Group Intervention on Psychological Wellbeing, Resiliency and Happiness of Foster Care Adolescent Girls. *Positive Psychology Research*, 2(2), 35-50. <https://doi.org/10.22108/ppls.2016.21335>
- Khanna, P., & Singh, K. (2019). Do All Positive Psychology Exercises Work for Everyone? Replication of Seligman et al.'s (2005) Interventions among Adolescents. *Psychological studies*, 64, 1-10.
- Krause, K. R., Bear, H. A., Edbrooke-Childs, J., & Wolpert, M. (2019). What Outcomes Count? Outcomes Measured for Adolescent Depression between 2007 and 2017. *Journal of the American Academy of Child & Adolescent Psychiatry*, 58(1), 61-71.
- Lee, H., Lee, H., Kim, Y., Lee, M., & Park, C. G. (2022). Reciprocal Relationship between Multicultural Adolescents' Depression and Life Satisfaction: A Random Intercept Cross-Lagged Panel Model for 3-Wave Panel Data. *Applied Research in Quality of Life*. <https://doi.org/10.1007/s11482-021-10032-w>
- Mehrsafar, A. H. (2016). Psychometric Properties of the Persian Version of the Revised Competitive State Anxiety Inventory-2. *Quarterly of Educational Measurement*, 6(23), 189-211. <https://doi.org/10.22054/jem.2016.5738>
- Melton, T. H., Croarkin, P. E., Strawn, J. R., & McClintock, S. M. (2016). Comorbid Anxiety and Depressive Symptoms in Children and Adolescents: A Systematic Review and Analysis. *Journal of Psychiatric Practice*, 22(2), 84.
- Milburn, N. G., Stein, J. A., Lopez, S. A., Hilberg, A. M., Veprinsky, A., Arnold, E. M., Desmond, K. A., Branson, K., Lee, A., & Bath, E. (2019). Trauma, Family Factors and the Mental Health of Homeless Adolescents. *Journal of Child & Adolescent Trauma*, 12, 37-47.
- Mirkamali, F., Khosravi, S. A., Shaygan, M., Karimi Afshar, E., & Karimi, E. (2021). The Effectiveness of Positivist Psychology Training on Cognitive Flexibility and Psychological Hardiness of Nurses. *Journal of nursing education*, 10(3), 1-10. <http://jne.ir/article-1-1202-en.html>
- Noferesti, A., & Okhovati, F. (2019). The Effectiveness of Positive Thinking Skills Training on Increasing Happiness and Resilience of Orphaned Adolescent Girls. *Rooyesh-e-Ravanshenasi Journal (RRJ)*, 8(10), 71-78. <http://frooyesh.ir/article-1-1837-en.html>
- Pan, S., Ali, K., Kahathuduwa, C., Baronia, R., & Ibrahim, Y. (2022). Meta-Analysis of Positive Psychology Interventions on the Treatment of Depression. *Cureus*, 14(2).
- Plessen, C. Y., Karyotaki, E., & Cuijpers, P. (2022). Exploring the Efficacy of Psychological Treatments for Depression: A Multiverse Meta-Analysis Protocol. *BMJ open*, 12(1), e050197.
- Rafiei, M., Masoudi, S., & Khakpour, M. (2025). The effectiveness of positive psychotherapy on cognitive flexibility, marital frustration, and post-traumatic growth in women with cancer. *A New Approach to Child Education*, 7(1), 10–21. https://mjms.mums.ac.ir/article_24591.html
- Sarı, T., Demirbağ, T., & Çalışkan, S. (2025). Building Resilience Through a Self-Help Psychoeducation Program Based on Positive Psychotherapy: A Pilot Study with Young Adults in Türkiye. *Advances in Resilience Science*, 6, 179-189. <https://doi.org/10.1007/s42844-025-00164-5>
- Shen, L., Gu, X., Zhang, T., & Lee, J. (2022). Adolescents' Physical Activity and Depressive Symptoms: A Psychosocial Mechanism. *International journal of environmental research and public health*, 19(3), 1276. <https://www.mdpi.com/1660-4601/19/3/1276>
- Sohrabi, H. (2023). A Comparison between the Impact of Positive Psychology and Young Adult-Oriented Mindfulness on Anxiety Management of the National Basketball Players with Disabilities. 2(2), 61-76. https://jsports.qom.iau.ir/article_704968_731fc7ed30b3d4629d0b1063a6517a2b.pdf
- Tejada-Gallardo, C., Blasco-Belled, A., Torrelles-Nadal, C., & Alsinet, C. (2020). Effects of School-Based Multicomponent Positive Psychology Interventions on Well-Being and Distress in Adolescents: A Systematic Review and Meta-Analysis. *Journal of youth and adolescence*, 49(10), 1943-1960.
- Wang, F., Guo, J., & Yang, G. (2023). Study on Positive Psychology from 1999 to 2021: A Bibliometric Analysis. *Frontiers in psychology*, 14, 273.
- Wang, M., Mou, X., Li, T., Zhang, Y., Xie, Y., Tao, S., Wan, Y., Tao, F., & Wu, X. (2023). Association between Comorbid Anxiety and Depression and Health Risk Behaviors among Chinese Adolescents: Cross-Sectional Questionnaire Study. *Jmir Public Health and Surveillance*, 9, e46289.
- Wu, X., Niu, Z., Zhu, Y., Shi, Y., Qiu, H., Gu, W., Liu, H., Zhao, J., Yang, L., & Wang, Y. (2022). Peripheral Biomarkers to Predict the Diagnosis of Bipolar Disorder from Major Depressive Disorder in Adolescents. *European Archives of Psychiatry and Clinical Neuroscience*, 272(5), 817-826.