

DEVELOPMENT AND VALIDATION OF THE SILVER LINING SCALE FOR YOUNG ADULTS IN PAKISTAN

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A “silver lining” is a metaphor for a positive aspect or hopeful element that can be found in a difficult, unfortunate, or adverse situation (Seery, 2011). This study was designed to develop a reliable and valid scale measuring silver lining in young adults involving multiple phases, including exploring the phenomenology of the construct, generating an item pool, conducting item reduction, and establishing the scale’s psychometric properties. The items were generated through an open-ended phenomenological method from 13 participants ($M_{age} = 25.9$, $SD_{age} = 4.8$). A list of 53 items (initial item pool) was validated by eight experts. For standardization of the Silver Lining Scale (SLS), 405 university students (men = 83, women = 322) with age ranging from 18 to 26 years ($M = 21.20$, $SD = 1.38$) were recruited through a stratified random sampling from a public sector university of Faisalabad (Pakistan). A demographic information sheet, General Benefit Finding Scale, Flourishing Scale, and WHO Brief QoL were used to establish the psychometric properties. The exploratory factor analysis (EFA) resulted in four factors: personal growth, familial bonding, empathy, and religiosity. The SLS was found to have an excellent internal consistency ($\alpha = .93$) along with strong reliability (test-retest and split-half) and validity (concurrent and convergent) coefficients. The SLS holds potential implications for research, practice, and policy development, particularly in positive psychology.

Keywords: Silver lining; Scale development; Young adults; Reliability; Validity.

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Adverse life events often lead to negative impacts on a person’s mental health and overall well-being. Research has shown that a higher degree of adversity is associated with more unfavorable outcomes, suggesting that having a life free of adversity is considered ideal (de Souza & Kamble, 2016). Studies have revealed a U-shaped relationship between lifetime exposure to adversity and mental health as well as well-being. Surprisingly, it has been observed that individuals with a history of adversity (e.g., job loss, natural disaster, physical ailment, etc.) tend to have better outcomes, not only compared to those who have experienced high levels of adversity but also when compared to individuals who have experienced no adversity at all. This finding holds significant implications for our understanding of how adversity in life can, in some cases, lead to a positive outcome (Seery, 2011). Researches show that the most challenging life experiences may eventually lead to a positive outcome by fostering an increased capacity to enjoy life’s small pleasures (de Souza & Kamble, 2016).

In the last years, there has been a notable shift in research focus. Instead of focusing just on studying stressors and coping mechanisms, researchers have turned their attention to exploring concepts such as “adversarial growth” (Tennen & Affleck, 2002) and “benefit finding” (Cassidy et al., 2014). Indeed, there is a

growing body of evidence suggesting that certain individuals can experience positive outcomes amid adversity. Furthermore, the ability to discover a “silver lining” or find benefits during times of trauma has been associated with reduced levels of depression and increased overall well-being (McGregor & Antoni, 2009; Moore et al., 2023).

The concept of “silver lining” refers to the beneficial outcome or hopeful perspective that can be found in any negative scenario that is recognized as a symbol of hope in a bad or bleak situation (Sodergren et al., 2002). This idea involves replacing fear with thoughts of optimism, hope, and finding benefits or small gains even in the face of significant losses (Sodergren et al., 2002). The well-known English phrase “There is a silver lining in every cloud,” which originated from John Milton’s (1608-1674) famous poem, emphasizes the notion that even in times of misfortune, there is always a potential for finding something positive. The application of this approach can be extended to various adverse and traumatic situations, where adopting a positive attitude and employing effective management strategies can contribute to the preservation of one’s capabilities and the ability to resiliently adapt and adjust to new challenges. By doing so, individuals may not only maintain but also potentially enhance their perceived quality of life.

The idea of finding a silver lining aligns with the principles of positive psychology, which suggests that during times of challenges or life-threatening situations, psychological and emotional assets such as optimism, autonomy, and the capacity to figure out the significance of any situation become predominantly important. The PERMA model, developed by Seligman, emphasizes the significance of mental assets in not only helping individuals adapt to adverse conditions, but also effectively managing the negative consequences of such situations and safeguarding both physical and psychological well-being (Buetow et al., 2020; Di Giuseppe et al., 2018, 2020; Seligman, 2011; Shariati & Dehghani, 2018).

Various conceptualizations, such as posttraumatic growth (Tedeschi & Calhoun, 1996) and stress-related growth (Park et al., 1996), have been proposed to describe the positive changes that can occur following challenging events. Although these terms are sometimes used interchangeably, it is important to note that they have distinct conceptual differences (Lechner, 2020). For instance, benefit finding is defined as a process aimed at identifying positive changes or benefits through the experience of adversity (Lechner, 2020; Pascoe & Edvardsson, 2014). In contrast, Post-Traumatic Growth (PTG) is conceptualized as an outcome that involves a profound transformative experience, resulting from a fundamental cognitive shift, which is experienced by a relatively small proportion of those who report positive changes after going through adversity (Lechner, 2020).

Considering that benefit finding is theoretically seen as one of the cognitive processes that can lead to PTG development (Lechner, 2020), it holds significance as a phenomenon contributing to overall psychological growth. Another related concept is personal recovery, which encompasses positive changes as well. Personal recovery is described as a multifaceted and subjective process that involves creating new meaning and purpose in life, enabling individuals to move beyond the profound impacts of mental illness (Anthony, 1993). It is worth noting that while personal recovery and benefit finding share certain similarities in perspective, personal recovery primarily focuses on individuals with mental illness and encompasses a more comprehensive range of processes in their lives compared to benefit finding (Chiba et al., 2011).

In literature, the concept of silver lining or benefit finding is often viewed as a positively oriented emotional coping strategy during times of adversity (Affleck & Tennen, 1996; Helgeson et al., 2006). Consequently, benefit finding is defined as a process of positive reappraisal that can foster positive coping emotions and behaviors among individuals facing life-altering experiences (Pascoe & Edvardsson, 2014; Tennen & Affleck, 2002). The notion of finding a silver lining has also been conceptualized as constructing positive meaning-making (Janoff-Bulman & Yopyk, 2004; Taylor, 1983). The results of a study in the context of a cancer

diagnosis predicted improved psychosocial adjustment in the years that followed (Carver & Antoni, 2004). The advantages that can arise from facing a challenging situation are unique to both the circumstances and the individual involved. Therefore, coping by discovering hidden benefits in specific situations remains as much of an art as it is a science. Nevertheless, scientific research does indicate that benefit finding is an effective coping strategy (Petersen, 2020).

Having a positive perspective is a highly personalized matter, and it is not a trait that can be universally expected from every individual (Alonso-Canovas et al., 2022). Discovering something positive in a negative situation is a common way of coping with adversity, often referred to metaphorically as “finding the silver lining in dark clouds.” This approach is supported by a substantial body of evidence in the field of psychology. Psychologists frequently discuss the concept of finding a silver lining or the ability to uncover hidden benefits within challenging circumstances.

To date, numerous researchers have proposed the evaluation of the subjective experience of benefit finding or discovering the silver lining, leading to the development of various assessment scales (Helgeson et al., 2006). One of the initial tools designed to explore this phenomenon was The Silver Lining Questionnaire (SLQ-38; Sodergren & Hyland, 2000), as discussed by Bride et al. (2008). The SLQ-38 comprises five domains, including improved relationships, increased appreciation of life, positive impact on others, increased inner strength, and changes in life philosophy. This questionnaire serves as a general measure of adversarial growth, prompting individuals to reflect on the positive aspects of their experiences with illness and express their level of agreement or disagreement with the 38 statements.

Another scale, the Benefit Finding Scale for Breast Cancer Patients, has been developed by Tomich and Helgeson (2004). This scale measures an individual’s perception of the positive changes or contributions that have occurred in their life as a result of being diagnosed with and treated for breast cancer. This measure consists of five domains: personal growth, acceptance, social contact, religion, and job performance. The 28-item Perceived Benefit Scale (PBS) for cancer was developed by Chien et al. (2011) and consisted of two factors: positive attitude and positive beliefs. Cassidy et al. (2014) also developed a general benefit-finding scale with six dimensions: acceptance, family bond, growth, relationships, empathy, and reprioritization. Recently, Chiba et al. (2020) also developed a Benefit Finding Questionnaire for chronic mental illness in Japan. This scale consists of 21 items divided into two subscales named “Changes in sense of values and way of thinking” and “Changes in relationships with others.” Additionally, the Brief Silver Lining Questionnaire for Parkinson’s disease (Alonso-Canovas et al., 2022) is another measure developed for assessing benefit finding in individuals with Parkinson’s disease.

Although there have been a growing number of studies examining benefit outcomes among individuals with chronic diseases in Asian countries, as demonstrated by research conducted by Li et al. (2017, 2018), Liu et al. (2016, 2018) and Zhang et al. (2019), it is worth noting that most scales used to assess the concept of finding a silver lining were developed in Western countries, as exemplified by the work of Cassidy et al. (2014) and Tomich and Helgeson (2004). Since the nature and manifestation of benefit-seeking or silver lining may be different between Asian countries and Western cultures (Li et al., 2017; Liu et al., 2016), it has yet to be clarified whether such existing measures are sufficiently applicable in Asian culture (e.g., Pakistan).

Furthermore, all above-mentioned scales are only designed to measure the silver lining of those individuals who are suffering from any mental or physical chronic illness, as literature shows (Alonso-Canovas et al., 2022; Pascoe & Edvardsson, 2014; Sodergren & Hyland, 2000). To the best of our knowledge, no such scale applies to the individual who is experiencing adverse situations such as natural disasters, death of a loved one, road accidents, and so forth, have been developed or examined. Traumatic events also guide people toward new directions in life (Calhoun & Tedeschi, 2006). As said, the silver lining has primarily been

studied in the context of health conditions. The underlying concept is that individuals tend to cope more effectively with medical issues when they can identify some unexpected advantages that arise from those challenges. However, it is important to note that the practice of finding benefits in adversity is a coping strategy that can be applied not only in the context of dealing with illness but also in the broader spectrum of life.

By reviewing the mentioned literature we therefore found that there is no scale for general population to find silver lining; that is why, we decided to develop a Silver Lining Scale for the general population. Even though research on resilience and optimism in young adulthood is growing, there is still a notable gap in the specific measurement of the ability to find a silver lining. While several scales exist for optimism, resilience, and positive affect, there is a dearth of instruments specifically designed to assess this particular construct in young adults. This gap is significant, since finding a silver lining is a crucial component of mental health, coping, and overall well-being. In this scenario, this study aimed to develop a reliable and valid scale to assess the silver lining in Pakistani young adults particularly in relation to their daily hassles. The study employed rigorous psychometric methods to validate the SLS, ensuring its reliability and validity. These include pilot testing, factor analysis, and validation against established measures of mental health and well-being. In summary, this study addressed a significant gap in the existing literature by providing a validated, targeted tool for measuring positive reappraisal in young adults, thereby contributing to both the theoretical and practical understanding of resilience and well-being in this crucial stage of life. This study might provide valuable insight into understanding the concept of the silver lining among young adults. The availability of a reliable and valid indigenous instrument to assess the silver lining will help to study this phenomenon in the context of community mental health.

METHOD

The current research was divided into two phases. Phase one (Step 1) was based on exploring the phenomenology and item generation, whereas in the second phase (Steps 2, 3, 4) the factor structure and psychometric properties of the scale were determined.

Step 1: exploring phenomenology and generating item pool. At first, phenomenology was explored for the development of the general Silver Lining Scale for young adults. The phenomenological method was chosen for item generation because of its ability to provide a deep and participant-centered understanding of the subjective experiences (Moran, 2002). By capturing the richness and diversity of these experiences, the method ensured that the items were both comprehensive and relevant, leading to the development of a robust and meaningful Silver Lining Scale. A sample of 13 participants (four men and nine women), with an age range of 20-35 years, undergraduate and postgraduate (BS, MS, & PhD) university students, were selected through a convenient sampling technique. The inclusion criteria for participants were the following: young adults (above 18 years of age), not diagnosed with any psychiatric disorder, and willing to participate in this study. The study commenced with a concise introduction outlining its purpose, emphasizing the assurance of confidentiality and anonymity granted to each participant. To investigate the phenomenon, an open-ended semi-structured interview approach was employed. Each participant underwent individual interviews, averaging 15 to 20 minutes in duration, during which they were asked the question “What common benefits have you discovered and encountered in your day-to-day challenges?” Supplementary clarifying questions were asked based on the answers received, such as inquiries regarding how, when, and what kinds of benefits were identified. Participants were encouraged to share specific instances and elaborate on their thoughts, feelings, and behaviors during these

experiences. With the participants' consent, their responses were meticulously recorded in verbatim form. Following each interview, a debriefing session was conducted with the participant to ensure clarity and address any concerns. Subsequently, each interview was transcribed and analyzed to identify common themes and patterns. After a comprehensive examination, a final list comprising 53 items was compiled. Each item was designed to reflect a distinct aspect of the lived experience of finding silver linings, ensuring that the scale comprehensively covered the construct. Throughout this process, utmost care was taken to preserve the original expressions and connotations provided by the participants. The items' content consisted of religiosity, family bonding, gratitude, empathy, and personal growth.

Step 2: expert validation. After designing all the possible items of the general Silver Lining Scale, the next step was expert validation to confirm the response format, to eliminate the overlapping and unnecessary items, and to establish the content validity of the newly developed scale. For this purpose, eight scale construction experts including one PhD scholar, three PhD degree holders, two senior practicing psychologists, one associate professor, and one assistant professor of psychology, were involved in the study. They were provided with the list of 57 statements along with instructions to rate the extent to which each statement reflects the construct of silver lining in young adults on a 5-point scale, where 0 = *not at all relevant*, 1 = *relevant to a very little extent*, 2 = *relevant to some extent*, 3 = *relevant to a great extent*, and 4 = *completely relevant*. Their suggestions contributed to the modification of some items. After expert validation, 53 items were retained. This list of 53 statements was given the name of the Silver Lining Scale (SLS) and the response rate was converted into a 5-point Likert type scale, where 1 = *totally disagree*, 2 = *somewhat disagree*, 3 = *neutral*, 4 = *somewhat agree*, and 5 = *agree*.

Step 3: try out. Following the expert review, a pilot study was conducted to check the user-friendliness and any other ambiguity in the administration of this newly developed Silver Lining Scale on 32 undergraduate students (from BSc 1st semester) in a public sector university. They were asked to rate the items based on their perception to find silver linings in difficult situations. The pilot study aimed to assess the clarity and comprehensibility of the items, as well as to identify any potential issues or areas for improvement. They were asked verbally about clarity and understanding of the scale items. No issue was reported by the participants related to understanding and comprehension of the items.

Step 4: establishing psychometric properties. This step of the study aimed to establish the psychometric properties of the SLS.

Participants

To adapt and develop a new instrument, five to 10 participants are required against one item for factor analysis (Hair et al., 2010; Hayran & Hayran, 2011). We selected seven participants against one item. So, the sample size for the SLS with 53 items was calculated as $53 \times 7 = 371$. For the current study, 420 participants were recruited. Five refused to participate, seven did not provide the essential demographic information, and the data of three participants was incomplete. Therefore, finally, 405 participants were included. The participants (men = 83 and women = 322) were selected through stratified random sampling and strata were made by men and women and semester-wise (2nd, 4th, 6th, and 8th students) with age ranges 18 to 26 years ($M = 21.20$, $SD = 1.38$). The study recruited participants from public sector universities located in Faisalabad, Pakistan. The participant pool consisted of both undergraduate and graduate students, encompassing individuals pursuing BSc Honors (383) and MSc (22) degree programs. To maintain consistency and uniformity in the sample, individuals with any

neurological or endocrinological problems were excluded. It is noteworthy that the sample in this study exhibited an overrepresentation of women, which can be attributed to a higher proportion of women enrolled in public institutions compared to men. Additionally, it was observed that the number of discarded data protocols (primarily due to incompleteness, carelessness, or inaccurate information) filled out by men was more than that of women.

Instruments

General Benefit Finding Scale (GBFS). The 28-item General Benefit Finding Scale (GBFS; Cassidy et al., 2014) was used to establish the concurrent validity of the newly developed Silver Lining Scale (SLS). This scale incorporates six different factors (acceptance, family bonds, personal growth, relationships, empathy, and reprioritization) and is used to ascertain levels of benefit finding concerning general life stress (Cassidy & Doyle, 2018). This scale is designed to assess levels of benefit-finding in response to everyday hassles, contributing to a deeper understanding of the resources required for preventive interventions aimed at enhancing psychological health (Cassidy et al., 2014). The response format of the GBFS employs a 5-point Likert scale, ranging from 1 = *not at all true* to 5 = *true*. The scale's internal consistency and the reported Cronbach's α values for the six factors are as follows: acceptance ($\alpha = .86$), family bonds ($\alpha = .76$), personal growth ($\alpha = .81$), relationships ($\alpha = .83$), empathy ($\alpha = .80$), and reprioritization ($\alpha = .82$) (Cassidy et al., 2014).

Flourishing Scale (FS). The Flourishing Scale (FS; Diener et al., 2009) was used to establish the convergent validity of the newly developed instrument of the Silver Lining Scale. The Flourishing Scale is a concise 8-item self-report assessment tool used to gauge an individual's self-perceived achievements in key domains such as self-worth, determination, relationships, and optimism. This scale is designed to measure fundamental aspects of social-psychological functioning, including a sense of purpose and meaning, supportive relationships, engagement, contribution to others' well-being, competence, self-acceptance, optimism, and the feeling of being respected (Schotanus-Dijkstra et al., 2016). Participants rate their agreement with each of the eight statements on a 7-point Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores on the scale indicate that an individual possesses a greater number of psychological strengths and resources. In this study, the Urdu version of the Flourishing Scale (Choudhry et al., 2018) was used.

WHO Bref Quality of Life Questionnaire (WHOQOL-BREF). The WHOQOL-BREF (World Health Organization, 1997) was used to establish convergent validity of the newly developed instrument of the Silver Lining Scale. The WHOQOL-BREF is a 26-item self-administered questionnaire designed to assess an individual's quality of life across four domains: psychological, physical, environmental, and social. Participants responded on a 5-point Likert scale, ranging from 1 (*very dissatisfied*) to 5 (*very satisfied*). Higher scores indicated a higher quality of life, except for three items that pertain to pain and discomfort, the need for medical treatment, and negative feelings (World Health Organization, 1997). The physical health domain comprises seven items and evaluates aspects such as mobility, daily life activities, pain, sleep, functional capacity, and energy. The psychological dimension includes six items and assesses negative thinking, self-image, positive approach, self-esteem, mindset, ability to learn, memory, consolidation, religion, and psychic condition. Social aspects, such as social support, sex life, and personal relationships, are categorized in the social relationship domain (three items). Lastly, the environmental health domain consists of eight questions covering financial assets, security, access to health and social services, living in a natural environment, opportunities for advanced learning experiences, relaxation, and aspects

of the physical environment, such as air quality, noise, pollution, and transportation (World Health Organization, 1996). The questionnaire primarily elicits subjective responses based on the individual's appraisal of their experiences over the preceding two weeks. In this study, the WHOQOL-BREF Urdu version (Lodhi et al., 2017) was utilized to assess participants' quality of life.

Sociodemographic information sheet. A sociodemographic information sheet was employed to gather key demographic data from the study's participants. This sheet included the participant's name (optional), as well as information regarding gender, age, family size, educational level, area of residence, monthly income, and other pertinent details.

Procedure

After getting the institutional permission, the process of data collection started. The present study utilized a mixed-methods approach consisting of three distinct phases. In the first phase, we drafted the item pool and designed the Silver Lining Scale (SLS) based on phenomenological exploration through one open-ended question from the participants. In this question, they were asked about the silver lining in their day-to-day hassle and experience. Initially, 57 items were generated. In the second phase, we reviewed and improved the initial items based on received feedback from experts and left with 53 items. After expert validation, the scale was administered to 32 university students for piloting. In last, the psychometric properties of the SLS were determined. For this purpose, 405 university students from undergraduate and postgraduate levels of study were selected. To examine the convergent and concurrent validities of the newly developed scale, the Flourishing Scale (FS; Diener et al., 2009), the WHO Bref Quality of Life Questionnaire (World Health Organization, 1997), and the 28-item General Benefit Finding Scale (GBFS; Cassidy et al., 2014) were administered. All ethical considerations were followed; informed consent from participants was taken and they were assured that their personal information such as family background, monthly income, and so forth, would be kept confidential and used only for research purposes. To protect anonymity, all participants were assigned an identity number for research.

Data Analysis

Data analysis was conducted utilizing SPSS Version 26. To assess the psychometric properties of the scale, we performed exploratory factor analysis (EFA), conducted reliability analysis, and evaluated criterion validity. These procedures were carried out following established principles of scale development (Furr, 2011) and specific guidelines for EFA as recommended by Costello and Osborne (2005) and Williams et al. (2010). Based on our aim to identify theoretically relevant factors, we employed a common factor model known as principal axis factoring (PAF; Costello & Osborne, 2005). Orthogonal factor rotation (Varimax) was used, as we expected factors to be uncorrelated (Fabrigar et al., 1999). Varimax rotation is a commonly used orthogonal rotation method in factor analysis and principal component analysis. In this study Varimax rotation was used because the goal was to simplify the factor structure and make the factors more interpretable. Varimax rotation produces orthogonal (uncorrelated) factors, which can be advantageous when the underlying factors are assumed to be independent or when the researcher wants to avoid multicollinearity issues in subsequent analyses (Costello & Osborne, 2005, 2019). The data underwent a suitability assessment, which involved examining interitem correlations. Criteria for item inclusion

required an interitem correlation (r) greater than .30. Additionally, we conducted Bartlett's test of sphericity (BTS) and assessed the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy to ensure data appropriateness (Tabachnick & Fidell, 2013).

To determine the appropriate number of factors, we employed the Kaiser criteria, including eigenvalues greater than 1 and a visual examination of the scree plot (Hinkin, 1998). To assess the relevance of the retained factors, we examined commonalities (with a preference for values exceeding .30) (Field, 2013) and considered the total variance explained, setting a minimum target of 60% (Hinkin, 1998). Subsequently, we applied qualitative judgment to evaluate the suitability of the factors concerning the intended factor structure (Costello & Osborne, 2005). In terms of individual items, we scrutinized the pattern matrix and retained items with factor loadings greater than .40 on a single factor, ensuring they did not exhibit cross-loadings on other factors (greater than .40) (Tabachnick & Fidell, 2013). To assess the internal consistency, or reliability, of items assigned to each factor, we calculated Cronbach's α , with a minimum acceptable level of .70 (Hinkin, 1998).

RESULTS

Table 1 shows the participants' essential demographic information, including gender, educational level, residential area, family system.

TABLE 1
Demographic information of the participants ($N = 405$)

Variables	Groups	Gender		
		Men	Women	Total(%)
		$f(\%)$	$f(\%)$	
Educational level	Graduation	82(20.3)	301(74.3)	383(94.6)
	Post-graduation	1(0.2)	21(5.2)	22(5.4)
	Total	83(20.5)	322 (79.5)	405(100)
Semester	2nd (MS)	1(0.2)	21(5.2)	22(5.4)
	4th	27(6.7)	80(19.8)	107(26.4)
	6th	40 (9.9)	142(35.1)	182(44.9)
	8th	15(3.7)	79(19.6)	94(23.3)
	Total	83(20.5)	322(79.5)	405(100)
Residential area	Urban	54(13.3)	255(63.0)	309(76.3)
	Rural	29(7.2)	67(16.5)	96(23.7)
	Total	83(20.5)	322(79.5)	405(100)
Family system	Nuclear	59(14.6)	250(61.7)	309(76.3)
	Joint	24(5.9)	72(17.8)	96(23.7)
	Total	83(20.5)	322(79.5)	405(100)

Table 2 shows the descriptive statistics of continuous demographic information of the participants including age, monthly income, family size, number of earning members.

TABLE 2
Descriptive statistics for demographic variables ($N = 405$)

Variables	M	SD
Age	21.20	1.38
Family size	7	3
Earning members	10	1.1
Monthly income	145042.61	126497.57

Exploratory Factor Analysis of the Silver Lining Scale (SLS)

Principal axis factoring with Varimax rotation was applied to cluster items sharing similar themes within the 53-item SLS dataset, involving 405 participants from a public sector university of Faisalabad (Pakistan) (see Table 3). These participants ranged in age from 18 to 26 years ($M = 21.20$, $SD = 1.38$). Scree plot (Figure 1) revealed the presence of four factors that provided the most accurate representation of the data, a conclusion supported by eigenvalue and variance considerations. Among the 53 items, 37 exhibited significant item-total correlations, with factor loadings equal to or exceeding .40, and were retained within their respective factors, while the remaining items were excluded due to their low loadings. Thus, the 53 initial items have been reduced to 37 based on the factor analysis. To assess the sample size adequacy, we utilized the KMO and Bartlett tests. The results demonstrated excellent sampling sufficiency, with a KMO value of .89 and a $p < .001$ in Bartlett's test of sphericity, in line with Kaiser's (1974) recommendations. The internal consistency of the scale was evaluated using Cronbach's α reliability, which was excellent (.93). For the four identified factors, the eigenvalues were as follows: 11.62, 2.38, 2.10, and 1.87, capturing 21.93%, 4.49%, 3.97%, and 3.52% of the variance, respectively. The cumulative variance accounted for 21.93%, 26.42%, 30.40%, and 33.92% for each of the four factors, respectively. Minimum factor loading is based on the above .40.

TABLE 3
The factor structure of the Silver Lining Scale (SLS) with Varimax rotation ($N = 405$)

Sr. #	Items	F1	F2	F3	F4	Sr. #	Items	F1	F2	F3	F4
1.	SLS24	.565				20.	SLS52		.456		
2.	SLS26	.562				21.	SLS44		.420		
3.	SLS20	.543				22.	SLS12			.596	
4.	SLS25	.539				23.	SLS11			.563	
5.	SLS37	.535				24.	SLS34			.562	
6.	SLS36	.526				25.	SLS39			.488	
7.	SLS9	.523				26.	SLS35			.478	
8.	SLS10	.492				27.	SLS49			.477	
9.	SLS23	.485				28.	SLS46			.457	

(table 3 continues)

Table 3 (continued)

Sr. #	Items	F1	F2	F3	F4	Sr. #	Items	F1	F2	F3	F4
10.	SLS30	.481				29.	SLS33			.455	
11.	SLS43	.472				30.	SLS13			.422	
12.	SLS40	.448				31.	SLS47			.416	
13.	SLS19	.446				32.	SLS3				.650
14.	SLS18		.629			33.	SLS2				.614
15.	SLS17		.623			34.	SLS1				.610
16.	SLS51		.614			35.	SLS6				.559
17.	SLS45		.611			36.	SLS7				.549
18.	SLS21		.592			37.	SLS5				.526
19.	SLS53		.464								

Note. Sr. # = serial number.

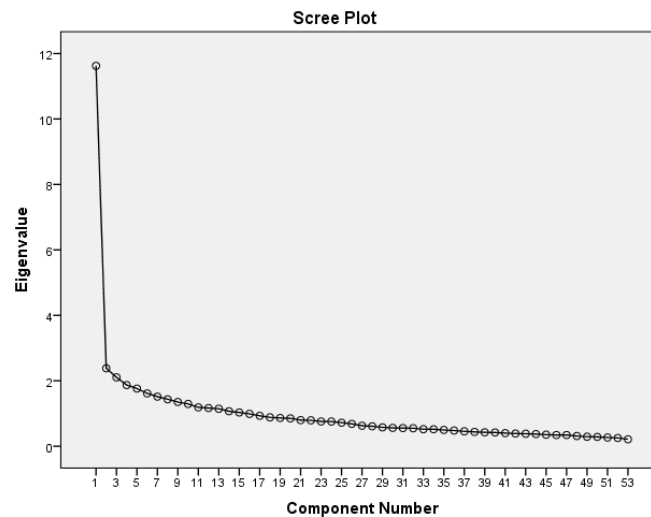


FIGURE 1
Scree plot showing extraction of factors of the Silver Lining Scale

The decision to proceed with a 4-factor solution for further analysis was based on the criterion proposed by Kaiser-Guttman (Kaiser, 1974), which considers an eigenvalue greater than 1 as indicative of a meaningful factor.

Factor 1: personal growth. This factor consists of 13 items (24, 26, 20, 25, 37, 36, 9, 10, 23, 30, 43, 40, 19) related to the theme of personal growth associated with acceptance of hardships with courage, understanding of others' difficulties, self-actualization, reprioritization, optimism, resilience, and so forth.

Factor 2: familial bonding. There are eight items (18, 17, 51, 45, 21, 53, 52, 44) in this factor describing the familial bonding associated with trust in family members, strong relationships with family members, family support, and closeness with family.

Factor 3: empathy. This factor contains 10 items (12, 11, 34, 39, 35, 49, 46, 33, 13, 47) predominantly related to others' sufferings, sensitivity to others' hardships, understanding of others' sorrows, caring for others, and showing kindness toward others.

Factor 4: religiosity. The fourth factor consists of six items (3, 2, 1, 6, 7, 5) characterized by religious practices, building a strong connection with Allah/God, being more committed to religious practices, and values, knowing your positive aspects, and so forth.

Table 4 shows the descriptive statistics of the newly developed Silver Lining Scale and its subscales. The table showed that data is normally distributed as per criteria for social sciences (skewness $< \pm 1$, and kurtosis $< \pm 3$) that is suitable for parametric statistics (Hair & Alamer, 2022).

TABLE 4
The factor structure of the Silver Lining Scale (SLS) with Varimax rotation ($N = 405$)

	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>	Skewness		Kurtosis	
						Statistic	<i>SE</i>	Statistic	<i>SE</i>
Personal growth	405	1.69	4.92	4.03	.51	−1.242	.121	2.313	.242
Familial bonding	405	1.38	5.00	4.17	.58	−1.459	.121	3.074	.242
Empathy	405	2.10	5.00	4.24	.45	−1.151	.121	2.228	.242
Religiosity	405	1.00	5.00	4.28	.56	−1.717	.121	5.619	.242
SLS total	405	2.01	4.76	4.18	.41	−1.636	.121	3.706	.242

Table 5 shows the findings of reliability analysis and intercorrelations among total and sub-scales of the newly developed Silver Lining Scale. It shows that the overall scale has excellent Cronbach's α and ω reliabilities (.93). Among subscales, personal growth and familial bonding had very good Cronbach's α and ω reliabilities ($\geq .80$). Cronbach's α and ω values for empathy and religiosity scale is good ($> .70$). It also shows the intercorrelations among the total and subscales of the newly developed Silver Lining Scale. It indicated a strong positive significant association between the overall scale and its subscales. All the subscales are also positively and significantly associated with each other.

TABLE 5
Mean, standard deviation, Cronbach's α , reliability values, and intercorrelation among total and subscales of the Silver Lining Scale ($N = 405$)

Scales	<i>k</i>	α	1	2	3	4	5
1. Personal growth	13	.83	–	.58***	.49***	.54***	.83***
2. Familial bonding	8	.80		–	.46***	.45***	.81***
3. Empathy	10	.74			–	.43***	.73***
4. Religiosity	6	.78				–	.78***
5. Silver Lining Scale	37	.93					–
<i>M</i>			4.03	4.17	4.24	4.28	4.18
<i>SD</i>			0.51	0.58	0.45	0.56	0.41

Note. *k* = number of items.

*** $p < .001$.

Test-retest reliability was assessed over a 3-week interval with a subset of 43 participants, representing 10.62% of the total sample. Initially, these participants were provided with the full current research protocol and were instructed to provide their name and participant ID# for identification purposes. It was explicitly communicated to them that their identity would solely be used for research purposes, and then after three weeks, they were retested using a demographic sheet and SLS. Results indicated that all the subscales had significant test-retest correlation ranges from .75 to .92 (Table 6).

TABLE 6
Test-retest reliability of total and subscales of the Silver Lining Scale ($N = 43$)

Scales	Test-retest values (Pearson's correlation)
1. Silver Lining Scale (SLS)	.70***
2. Personal growth	.75***
3. Familial bonding	.78***
4. Empathy	.92***
5. Religiosity	.85***

*** $p < .001$.

Concurrent Validity

The concurrent validity of the newly developed Silver Lining Scale was established with the help of the General Benefit Finding Scale (Cassidy et al., 2014). Results (Table 7) showed a highly significant positive association between both scales and their subscales.

TABLE 7
Intercorrelation among total and subscales of the Silver Lining Scale (SLS)
and General Benefit Finding Scale (GBFS) ($N = 405$)

Scales	Acceptance	Family bonding	Family growth	Relationships	Empathy	Reprioritization	GBFS total
Personal growth	.40***	.36***	.29***	.29***	.27***	.29***	.42***
Familial bonding	.37***	.52***	.36***	.31***	.20**	.32***	.46***
Empathy	.28***	.26***	.23***	.26***	.23**	.22**	.32***
Religiosity	.35***	.31***	.20**	.11	.18*	.21**	.30***
SLS total	.45***	.50***	.37***	.35***	.31***	.35***	.62***

* $p < .05$; ** $p < .01$; *** $p < .001$.

Construct Validity

Construct validity (convergent) of the Silver Lining Scale was established with the help of the Flourishing Scale (Diener et al., 2009) and subscales of the WHO Bref Quality of Life Questionnaire (World

Health Organization, 1997). Results (Table 8) showed a significant positive association between the Silver Lining Scale and its subscales with the Flourishing Scale and all subscales of the WHO Bref Quality of Life Questionnaire (physical quality of life, psychological quality of life, social quality of life, and environmental quality of life).

TABLE 8
Intercorrelation among Silver Lining Scale (SLS), its subscales, Flourishing Scale,
and subscales of WHO Bref Quality of Life Questionnaire ($N = 405$)

Scales	Flourishing Scale	Physical QoL	Psychological QoL	Social QoL	Environmental QoL
Personal growth	.23***	.41***	.41***	.33***	.38***
Familial bonding	.12	.37***	.38***	.38***	.46***
Empathy	.14*	.23***	.15*	.20**	.23***
Religiosity	.20**	.31***	.37***	.29***	.37***
SLS total	.22***	.43***	.42***	.37***	.43***

Note. QoL= Quality of Life.

* $p < .05$; ** $p < .01$; *** $p < .001$.

DISCUSSION

The Silver Lining Scale (SLS) appears to be a psychometrically strong instrument designed to measure an individual's tendency to find positive aspects or benefits in challenging or adverse situations. This scale is rooted in the concept of positive cognitive reappraisal, which involves reframing negative experiences in a more positive light (Nowlan et al., 2015). The current study was conducted to develop a valid and reliable positive-centered scale in Pakistani young adults. After expert validation and EFA, it was transformed into a 37-item 5-point scale. EFA yielded four factors of SLS highlighting the phenomenon of silver lining. The factor structure of the newly developed measure was in line with the tools developed in other countries but the main difference is that the current tool is related to daily hassles while other instruments were related to specific diseases such as the Silver Lining Questionnaire (SLQ; Sodergren & Hyland, 2000), the Benefit Finding Scale for Breast Cancer Patients (Tomich & Helgeson, 2004), the Benefit Finding Questionnaire for people with mental illness (Chiba et al., 2020), the 17-item Benefit Finding Scale (Antoni et al., 2001).

EFA yielded four factors for SLS including personal growth, familial bonding, empathy, and religiosity. Personal growth in the context of finding a silver lining refers to the development and improvement of oneself through a positive perspective and mindset. It involves recognizing and focusing on the positive aspects or opportunities that may arise from challenging situations. When faced with adversity or setbacks, it is natural to feel discouraged or upset. However, personal growth encourages individuals to shift their perspective and look for the silver lining, which is the positive or beneficial aspect of a situation. Silver lining improves personal development; hence, it is possible to affirm that silver lining and personal growth are directly associated with each other (Zhang & Chen, 2016). By actively seeking out the silver lining in the face of adversity, individuals can develop resilience (Coleman & Wernberg, 2020; Seery, 2011), optimism (Erlich et al., 2021; Seery, 2011), and a greater sense of self-awareness (Lehr & Vaughan, 2021). They learn to find lessons or opportunities for growth in difficult experiences, allowing them to develop new skills, perspectives, or strengths. Finding the silver lining can also lead to personal transformation. It can help individuals become more adaptable, open-minded, and appreciative of life's ups and downs. It encourages individuals to embrace challenges as growth

opportunities rather than viewing them as obstacles (Hatch et al., 2015). Overall, personal growth in finding a silver lining is about cultivating a positive mindset, embracing challenges, and using them as stepping stones to become a better version of oneself. It involves recognizing the potential for growth and improvement in every situation, even when things may not initially seem favorable (Kowalski et al., 2022).

The second factor is familial bonding. In the context of finding a silver lining it refers to strengthening and deepening the relationships within a family through positive perspectives and experiences. It involves recognizing and appreciating the positive aspects of family relationships, even in challenging or difficult times (Hatch et al., 2015). When faced with adversity or setbacks, it is normal for tensions to rise or for relationships to be tested within the family. However, finding a silver lining encourages family members to come together, support one another, and find the positive aspects of the situation. By actively seeking out the silver lining, families can develop stronger bonds, resilience, and a greater sense of unity. They learn to appreciate and value each other's strengths, perspectives, and contributions (McLeod & Dulsky, 2021). This can lead to improved communication, empathy, and understanding among family members. Finding the silver lining can also create opportunities for shared experiences and growth as a family. It can lead to the development of new traditions, hobbies, or activities that bring family members closer together (Broner et al., 2022). It encourages families to find joy, laughter, and gratitude amid challenges, fostering a positive and supportive environment. Overall, familial bonding in finding a silver lining is about enlightening a positive and resilient family dynamic. This way family members can grow closer, support one another, and create lasting memories and connections (Lightfoot et al., 2021).

Empathy, the third factor, can be considered a subfactor of finding a silver lining because it plays a crucial role in recognizing and understanding the experiences and emotions of others. By practicing empathy, they can put themselves in someone else's shoes, understand their perspective, and connect with them on a deeper level. In the context of finding a silver lining, empathy allows to not only focus on the positive perspectives, but also to consider the experiences and emotions of others. It helps to recognize that everyone may have their challenges and difficulties, and to approach situations with compassion and understanding (Starzyk & Ross, 2008). By practicing empathy, one can find the silver lining in difficult situations by acknowledging the emotions and needs of those around them. This can lead to better communication, support, and collaboration, as one strives to find positive solutions and outcomes that benefit everyone involved. Empathy also fosters stronger relationships and connections (Roberts, 2017). When one genuinely understands and empathizes with others, they create a sense of trust and mutual respect. This can also strengthen familial bonds, friendships, and even professional relationships (Yip & Maestre, 2023). Overall, empathy as a subfactor of finding a silver lining encourages to consider the experiences and emotions of others, allowing to approach difficult situations with compassion and understanding. By practicing empathy, a more inclusive, supportive, and positive environment can be created (Huang et al., 2021).

Finally, the fourth factor, religiosity, refers to the degree of commitment and involvement in religious beliefs, practices, and values (Delener, 1994). Religiosity can be considered a subfactor of finding a silver lining because it can play a role in how individuals perceive and interpret challenging or difficult situations (De Castella & Simmonds, 2013). As an active coping strategy, turning to religion in the face of trauma has proven valuable for fostering PTG (Koenig, 2009; see also Abu-Raiya et al., 2010). For decades, research has explored whether religion exerts positive and/or negative, direct or indirect effects on coping with difficulties (Ano & Vasconcelles, 2005), mental health issues (Koenig, 2009), and trauma (Krok, 2014). The idea is that religion acts as a sacred lens for managing everyday stressors, adversity, and trauma, sometimes enabling individuals to reinterpret their circumstances positively or as a defense mechanism (Krok, 2014). In times of stress, turning to religion can provide support through communal congregation (Ersahin, 2022). Religiosity can be viewed as a

meaning-making system, fostering resilience, growth (Park & Blake, 2020), and well-being (Butt et al., 2023). However, when individuals start doubting their religious affiliations and questioning their faith, this may have a negative effect, leading to maladaptive coping with stress or traumatic events (Pargament, 1997).

People follow religious pathways to cope with stressful situations and feel protected from the negative effects on their physical and psychological health (Krok, 2015). Religiosity contains the beliefs, practices, and lifestyle of the followers. It is the extent to which they adopt religion as a coping strategy and regulate their emotions while facing difficulties in daily life (Kim-Prieto & Diener, 2019). When faced with adversity or setbacks, religious individuals may draw upon their faith as a source of strength, hope, and resilience. Religious beliefs and practices can provide individuals with a framework to find meaning and purpose in difficult circumstances, which in turn can contribute to their ability to find a silver lining (Faigin & Pargament, 2011). Religiosity can also create a sense of community and support. Religious communities often offer a network of support and encouragement, allowing individuals to lean on others for emotional and spiritual support during challenging times (Canda et al., 2019). This sense of community can contribute to a more positive outlook and the ability to find silver linings. Religiosity can sometimes enhance empathy by providing individuals with guiding principles and teachings that emphasize compassion, love, and caring for others. Many religious traditions and teachings promote empathy as a virtue and encourage believers to show kindness and understanding toward others (Krause & Hayward, 2015). Additionally, religious teachings and values often emphasize virtues such as gratitude (Aghababaei et al., 2018; Kraus et al., 2015), forgiveness (Ru'ya et al., 2020), and compassion (Varaee et al., 2017). These teachings can shape individuals' perspectives and attitudes, helping them to focus on the positive aspects of a situation and find silver linings even amid adversity.

In Pakistan, religiosity plays a significant role in shaping individuals' perspectives and coping mechanisms, especially during times of adversity. Many Pakistanis believe that everything happens according to God's will. This belief provides comfort and hope, helping individuals see a silver lining even in difficult times, as they trust that there is a greater purpose behind their struggles. Congregational activities such as prayers (Salat), Friday sermons (Khutbah), and religious gatherings, fosters a sense of community and solidarity (Whitney & King, 2014). This collective participation provides emotional and social support, which can be crucial during adverse times. Islamic teachings emphasize the importance of charity. The practice of giving Zakat (obligatory almsgiving) and Sadaqah (voluntary charity) not only helps those in need but also creates a network of support, reinforcing the idea that one is not alone in their struggles (Malik, 2016). Additionally, engaging in religious practices, such as prayer and recitation of the Quran, can have a calming effect, reducing stress and anxiety (Henry, 2015; Moulai et al., 2023). This spiritual solace acts as a psychological buffer, enhancing resilience against adversity (Bradshaw & Ellison, 2010; Girgis, 2020). Religiosity also encourages positive thinking and cognitive reframing (Vishkin et al., 2016). For instance, seeing challenges as tests from God can help individuals reframe their experiences in a more positive light, finding growth and learning opportunities in their difficulties. In conclusion, we can say that religiosity in Pakistan acts as a multifaceted source of strength and support during adversity. It provides hope, community solidarity, moral guidance, psychological resilience, and a sense of cultural identity, all of which contribute to finding a silver lining in challenging circumstances.

PRACTICAL IMPLICATIONS

The newly developed Silver Lining Scale has several important implications for research and practice specific to the Pakistani context. The Silver Lining Scale can help researchers gain a deeper understanding of how individuals in Pakistan perceive and find positive aspects in challenging situations. It can shed light on cultural nuances and specific beliefs or values that influence the way people in Pakistan cope with

adversity and find silver linings. The proposed Silver Lining Scale can be used in mental health interventions and counseling settings to assess individuals' ability to find positive aspects in difficult life circumstances. This can inform the development of culturally appropriate interventions that focus on enhancing resilience and promoting positive coping strategies. The scale can be applied in educational settings to assess student's ability to find silver linings in academic challenges or personal setbacks. Moreover, this information can guide educators and policymakers in designing programs and interventions that foster resilience, positive thinking, and personal growth among students. Finally, the scale can also be used to assess the resilience and positive coping strategies of communities in Pakistan facing various challenges, such as natural disasters or sociopolitical upheavals. This can help identify strengths within communities and guide interventions that promote community resilience and well-being.

LIMITATIONS AND SUGGESTIONS

The study was conducted with a specific population (students) and in a specific region (Faisalabad) of Pakistan, which could limit the generalizability of the findings to the entire country. It is important to consider the sociodemographic characteristics and cultural diversity within Pakistan and ensure that the sample is representative of the population of interest. Moreover, the current study notes an overrepresentation of women in the sample, which could limit the generalizability of the findings to the broader population. It would be appropriate for future researchers to include an additional screening for common mental health problems, psychosocial distress in everyday life, or subjectively perceived stress, which could enhance the theoretical part in future. Excluding individuals with neurological or endocrinological problems could limit the applicability of the scale to individuals with such conditions, reducing its generalizability. In the future, further studies could also include the individuals with such conditions and could enhance the generalizability of the scale.

The Silver Lining Scale relies on self-report measures, which are subject to potential biases such as social desirability bias or response bias. Participants may provide responses that they perceive as more socially acceptable or may not accurately represent their true experiences or perspectives. Although initial psychometric properties have been assessed, further validation studies are necessary to establish the reliability and validity of the Silver Lining Scale in the Pakistani context. Future studies should consider conducting additional analyses, such as confirmatory factor analysis, to further establish the scale's psychometric properties. This study relied on cross-sectional data, which limits the ability to make causal inferences or assess the stability of the scale over time. Longitudinal studies are needed to examine the stability and predictive validity of the Silver Lining Scale in capturing changes in individuals' ability to find silver linings over time. By addressing these limitations, researchers can enhance the scale's applicability and ensure its robustness for both research and practical purposes.

CONCLUSION

In conclusion, the development and validation of the Silver Lining Scale for young adults in Pakistan marks a significant contribution to the literature in the positive psychology. By capturing the unique cultural and social nuances of the Pakistani context, the scale provides an important tool for assessing the ability to find positive aspects in challenging situations, particularly among young adults who face various stressors. The scale demonstrated excellent psychometric properties, including high internal consistency and strong convergent and discriminant validity. Furthermore, the scale offers potential for future applications in mental health interventions, contributing to the enhancement of coping mechanisms among young adults.

Future research may explore the scale's utility in various contexts, such as clinical settings, educational programs, and workplace interventions, to promote resilience and well-being among young adults.

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