

Self-Esteem, Professional Grit, Social Acceptance, and Life Satisfaction among Music Students in Lahore: An Exploratory Cross-Sectional Study

 Muhammad Asif¹

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Abstract

This study examined the relationships among self-esteem, professional grit, social acceptance, and life satisfaction among music students in Lahore, Pakistan. The study was positioned as an exploratory cross-sectional investigation because research on the psychosocial well-being of music students in Pakistan remains limited and because music training combines sustained performance demands with strong dependence on interpersonal evaluation and social recognition. A purposive sample of 60 music students (40 men and 20 women), aged 19–30 years, was recruited from the University of the Punjab, National Music Academy, and Alhambra Arts Council. Participants completed the Rosenberg Self-Esteem Scale, the Satisfaction with Life Scale, an adapted Professional Grit Scale, and a self-constructed Social Acceptance Scale. Pearson correlations, multiple linear regression, independent-samples *t* tests, and one-way analysis of variance were conducted in SPSS. Professional grit was positively associated with social acceptance ($r = .33, p < .01$), life satisfaction ($r = .32, p = .013$), and self-esteem ($r = .33, p = .011$). Social acceptance showed the strongest association with life satisfaction ($r = .68, p < .01$) and was the only statistically significant predictor in the multiple regression model, which explained 46.9% of the variance in life satisfaction. No statistically significant gender or birth-order differences were observed. The findings place social acceptance at the center of the observed pattern of life satisfaction in this sample and are consistent with recent evidence emphasizing social support, belonging, and connectedness in student and musician well-being. However, the small purposive sample and low internal consistency of several measures, particularly professional grit and social acceptance, require cautious interpretation. Future research should replicate the model with larger samples and validated measures of social inclusion and profession-specific grit.

Keywords: Life satisfaction; music students; professional grit; self-esteem; social acceptance; well-being

¹ORIC, the University of Lahore, Punjab, Pakistan
e-mail: muhammad.asif@oric.uol.edu.pk



1 Introduction

Life satisfaction is a cognitive component of subjective well-being that reflects the extent to which people evaluate their lives favorably according to their own standards (Diener et al., 1985, 1999). In university populations, life satisfaction is shaped by a mixture of personal resources, academic experiences, relationships, health, and social context. Recent work has continued to show that university well-being cannot be understood only as the absence of distress; it also involves positive evaluations of one's life, a sense of connection, perceived competence, and access to supportive environments (Donald & Jackson, 2022). These issues are especially relevant for music students because higher music education combines the ordinary demands of university life with intensive practice, public performance, evaluation by teachers and peers, career uncertainty, and strong identity investment in musical competence.

Contemporary research on music students increasingly treats health and well-being as central educational concerns rather than peripheral issues. Rose et al. (2021) found that students entering specialized higher music education described success and well-being as closely intertwined, while also reporting performance-related and vocational pressures. A longitudinal study by Rosset et al. (2022) similarly emphasized the need for health promotion within music universities, noting the physical and mental challenges that can emerge early in professional training. Qualitative evidence from Norwegian music students identified performance pressure, difficulties maintaining healthy routines, and the need for social and institutional resources as recurrent themes (Ege et al., 2023). More recent studies have reinforced the social dimension of this problem. Vengurlekar et al. (2024) showed that support from people within the music-learning environment can matter for students facing music-specific stress, and McGoldrick et al. (2025) reported that perceived social support was meaningfully related to mental health among college music students. Taken together, this literature suggests that the well-being of music students is embedded in both individual psychological resources and the relational environment in which musical identities are developed.

The positive side of musical engagement is also important. Music is not only a source of performance demands; it can provide meaning, identity, social connection, emotional regulation, and opportunities for mastery. Fu and Tu (2023) reported that music lessons could enhance subjective well-being among university students even when changes in self-esteem were not observed. Tu and Fu (2024), focusing specifically on music students, found that music engagement and music empathy were positively associated with subjective well-being and that self-esteem and prosocial tendencies helped explain these relationships. Barbeau et al. (2024) likewise examined well-being, mental health, and social support across student, amateur, and professional musicians and demonstrated that musical practice is closely connected with psychosocial functioning. In 2025, Fang and Chen further reported positive links between music classes and psychological well-being in a large student sample, highlighting the importance of supportive educational conditions. Thus, current scholarship presents music education as a context with both substantial psychological demands and substantial potential resources.

The present study focuses on three psychosocial factors that may be particularly relevant to life satisfaction in this context: self-esteem, professional grit, and social acceptance. Self-esteem reflects a broad evaluation of personal worth. Professional grit reflects sustained effort and commitment toward long-term professional goals. Social acceptance reflects the perception that one is included, valued, and regarded positively by relevant others or social groups. Although these constructs are conceptually distinct, they may be mutually reinforcing in music education. A student who feels respected and accepted may experience greater confidence and satisfaction, while a student who persists through demanding training may develop a stronger sense of competence and professional identity. Conversely, repeated rejection, social marginalization, or uncertainty about the legitimacy of music as a career may diminish the psychological benefits of persistence.

The Pakistani context provides additional reasons to examine these relationships. Evidence from

Pakistani university populations shows that both intrapersonal and social resources are relevant to well-being. Ain et al. (2021), studying undergraduates in Lahore, found that grit was positively related to life satisfaction, although the association was modest. Iqbal et al. (2023), using data from university students in Punjab, found positive associations between multiple forms of social capital and happiness. These findings support the relevance of perseverance and social resources in local student populations, but they do not directly address students whose education and future careers are centered on music. The present study therefore extends this line of inquiry to music students in Lahore and evaluates the relative roles of self-esteem, professional grit, and perceived social acceptance in their life satisfaction.

A further contribution is the simultaneous examination of these variables. Much of the recent literature investigates self-esteem, grit, or social support separately, or embeds them within broader models of mental health and adaptation. For example, recent studies have linked self-esteem with life satisfaction among university students (Chan & Huang, 2024; Garnique-Hinostroza et al., 2024), while other work has connected grit with life satisfaction through depression, motivation, self-control, or academic adaptation (Liu et al., 2022; Lozano-Jiménez et al., 2021; Noronha et al., 2024; Ramos Salazar & Meador, 2023). Social belonging and connectedness have also been associated with life satisfaction in university settings (Avci, 2023; Mo et al., 2024). Yet the relative contribution of these resources among music students, particularly in Pakistan, remains underexplored.

Accordingly, the study addressed two primary questions. First, how are self-esteem, professional grit, social acceptance, and life satisfaction related among music students? Second, when self-esteem, professional grit, and social acceptance are considered together, which variables make unique statistical contributions to life satisfaction? Gender and birth-order differences were also examined as secondary analyses in line with the original study design. Because the data were collected at one time point, the term “predictor” is used in the statistical regression sense and not as evidence of temporal or causal influence.

1.1 Music students, well-being, and the social context of training

Music students occupy a distinctive position within higher education. Their academic work frequently involves individual practice, public performance, auditions, juries, ensemble participation, and close evaluation by specialist instructors. These activities can strengthen mastery and identity but can also make students’ self-evaluations unusually visible and socially contingent. Rose et al. (2021) described music students as entering an achievement-oriented environment in which ideas of health, success, and professional identity are tightly connected. Rosset et al. (2022) further showed that music students may face both physical and psychological challenges during early university training, making preventive support and health literacy important institutional concerns.

Social resources appear repeatedly in recent music-student research. Ege et al. (2023) found that students described peers, teachers, and shared musical experiences as important resources for health. Vengurlekar et al. (2024) reported that music-specific stress was associated with internalizing symptoms and that support from particular figures in the music environment could buffer some negative outcomes. McGoldrick et al. (2025) also found perceived social support to be closely related to the mental health of college music students. These studies do not measure “social acceptance” in exactly the same way as the present study; nevertheless, support, belonging, inclusion, and acceptance share an interpersonal core. All concern whether students experience their social environment as available, affirming, and safe enough to support functioning.

The wider literature on musicians reaches a similar conclusion. Musgrave (2023) argued that musicians’ well-being is shaped by relational work and by the emotional consequences of managing professional and personal relationships. Barbeau et al. (2024) found that patterns of musical practice and participation were intertwined with perceived social support and well-being. This relational perspective is important because a music career rarely develops through skill alone.

Access to teachers, peers, collaborators, audiences, networks, and performance opportunities can shape both career development and psychological experience. For students, therefore, perceived acceptance may be more than a general interpersonal preference; it may carry implications for belonging in a field to which they are making a long-term identity commitment.

Recent studies also show that musical participation can support positive psychological outcomes. Tu and Fu (2024) reported positive relationships between music engagement, music empathy, self-esteem-related processes, prosocial tendencies, and subjective well-being among music students. Fu and Tu (2023) found that structured music lessons improved subjective well-being among university students, even though self-esteem itself did not significantly change as a result of the intervention. Fang and Chen (2025) likewise reported a positive relationship between music classes and psychological well-being, with educational support conditions playing an important role. These findings caution against portraying music education only as a risk environment. Instead, music training can be understood as a high-investment context in which personal strengths and social resources may determine whether demanding experiences are translated into growth, satisfaction, or distress.

1.2 Self-esteem and life satisfaction

Self-esteem refers to an individual's overall positive or negative evaluation of the self (Rosenberg, 1965). Sociometer theory gives self-esteem a distinctly interpersonal function: self-esteem is proposed to track perceived relational value and therefore to respond to cues of social inclusion and exclusion (Leary et al., 1995). This theoretical connection is relevant to the present study because self-esteem and social acceptance should not be treated as unrelated domains. A student who repeatedly experiences recognition and inclusion may develop a more positive sense of personal worth, while perceived rejection can threaten self-evaluation. At the same time, self-esteem is broader than momentary social approval and can reflect accumulated experiences across family, academic, and personal domains.

Recent university research continues to connect self-esteem with life satisfaction. Garnique-Hinostroza et al. (2024), in a large sample of university students, found that positive self-esteem significantly predicted life satisfaction. Chan and Huang (2024) likewise found that self-esteem played a mediating role in the relationship between hope and life satisfaction. Mamani-Benito et al. (2023) included self-esteem and life satisfaction in a model of future expectations among university students, further illustrating the close relationship between positive self-evaluation and broader evaluations of life. These findings are consistent with the logic that students who view themselves as worthy and capable are more likely to evaluate their overall lives favorably.

Music-related research also supports the relevance of self-esteem, although findings are not uniform. Fu and Tu (2023) found that baseline self-esteem was positively related to subjective well-being, but music lessons did not directly increase self-esteem. Tu and Fu (2024) found that self-esteem helped explain links between musical engagement and subjective well-being among music students. Jiang (2024) similarly reported a role for self-esteem in the relationship between music learning and psychological development. Such findings suggest that self-esteem may function as one pathway through which educational and musical experiences relate to well-being, rather than as an outcome that changes automatically with musical exposure.

The present study therefore expected self-esteem to be positively associated with life satisfaction. However, it was also important to examine whether self-esteem retained a unique association after social acceptance and professional grit were entered in the same regression model. This distinction matters because self-esteem may share variance with social acceptance, particularly when the latter captures students' perceptions of being valued by others.

1.3 Professional grit and life satisfaction

Grit was originally defined as perseverance and passion for long-term goals (Duckworth et al., 2007). The construct emphasizes sustained effort and consistency over extended periods rather than short-term persistence. Music training appears, at least conceptually, to be a setting in which

grit should matter because skill development often requires years of deliberate practice, repeated correction, delayed rewards, and persistence through performance setbacks. In the present study, “professional grit” refers to the application of grit-like persistence to students’ chosen professional direction in music.

Research since the introduction of the construct has produced both supportive and critical evidence. A major meta-analysis by Credé et al. (2017) showed that grit overlaps substantially with conscientiousness and that perseverance of effort tends to be more useful than consistency of interests for predicting performance-related outcomes. Thus, grit should not be treated as a universal explanation of success. Even so, recent work continues to show meaningful associations between grit and student well-being. Ain et al. (2021) found a positive but modest association between grit and life satisfaction among Pakistani undergraduates. Liu et al. (2022) reported that grit was positively correlated with life satisfaction among Chinese college students and that depression helped explain part of this relationship. Lozano-Jiménez et al. (2021) found that grit contributed to a broader motivational pathway involving basic psychological needs, intrinsic motivation, group cohesion, and life satisfaction. Ramos Salazar and Meador (2023) further linked grit with well-being through self-control, while Noronha et al. (2024) found that academic adaptation mediated substantial portions of the relationship between grit dimensions and life satisfaction among Brazilian undergraduates.

The music-specific evidence is especially informative because it also reveals potential limits. Czerwiński et al. (2023) studied music academy students and showed that perseverance may not always be beneficial when it becomes entangled with study addiction. This finding is important for interpretation: persistence is psychologically useful when it supports adaptive goal pursuit, but inflexible overinvestment can undermine well-being. Music students often receive cultural messages that success requires extreme dedication, making the distinction between healthy persistence and compulsive effort particularly relevant.

For these reasons, the study expected professional grit to be positively related to life satisfaction, while recognizing that any association might be modest. The study also examined whether grit had a unique statistical contribution once self-esteem and social acceptance were considered simultaneously.

1.4 Social acceptance, belonging, and life satisfaction

Humans have a fundamental need to form and maintain meaningful social bonds (Baumeister & Leary, 1995). Social acceptance refers to perceived inclusion, approval, and relational value within relevant interpersonal or group contexts. Although recent university studies more often use constructs such as perceived social support, belongingness, social connectedness, or social capital, these constructs overlap with social acceptance in their focus on the quality and availability of social relationships. They should not be treated as identical measures, but they provide converging evidence that relational resources are strongly connected to student well-being.

Avcı (2023) found that university belonging predicted life satisfaction and that social connectedness helped explain this relationship. Mo et al. (2024), in a very large university sample, found that both offline and online social support were associated with life satisfaction and mediated relationships between patterns of social interaction and life satisfaction. In Pakistan, Iqbal et al. (2023) reported positive associations between components of social capital and happiness among university students in Punjab. These studies suggest that students’ well-being is not only a product of individual traits; it also reflects whether they experience reliable, affirming social ties.

This point is especially salient for music students. Ensembles, lessons, rehearsals, juries, performances, and peer comparison make social evaluation a routine part of musical training. Vengurlekar et al. (2024) identified teacher and peer support as potentially important in the context of music-specific stress, and McGoldrick et al. (2025) showed that perceived social support was associated with better mental health among college music students. Ege et al. (2023) likewise emphasized social resources in students’ accounts of managing health challenges. From

a sociometer perspective, social acceptance may also support self-esteem by communicating that the student is valued within a meaningful community.

The present study therefore expected social acceptance to be positively related to life satisfaction and anticipated that it could make a substantial contribution when the three psychosocial predictors were considered together. Because the social acceptance measure used in the study was self-constructed, however, any strong association needed to be interpreted as preliminary and in need of replication with a validated measure.

1.5 Conceptual framework and hypotheses

The original study drew broadly on need-based motivational thinking, particularly the idea that esteem and belonging are important human needs. For a journal-style interpretation, the present article retains that broad motivational logic while giving greater emphasis to sociometer theory and contemporary student well-being research. Sociometer theory directly connects self-esteem with perceived social valuation (Leary et al., 1995), while the grit literature explains sustained goal pursuit under long-term demands (Duckworth et al., 2007). Life satisfaction serves as the global evaluative outcome. The resulting framework views music-student well-being as a combination of self-evaluation, persistent professional striving, and perceived relational inclusion.

The primary hypotheses were: (H1) self-esteem, professional grit, and social acceptance would each be positively associated with life satisfaction; and (H2) self-esteem, professional grit, and social acceptance would jointly explain significant variance in life satisfaction. The original protocol also proposed differences by gender and birth order; these were retained as secondary exploratory comparisons because prior evidence is mixed and because the present sample was small and uneven across groups.

The study contributes to the literature in three ways. First, it provides data from a comparatively understudied cultural and educational setting. Much of the recent music-student well-being literature has been generated in Europe, North America, and East Asia, whereas evidence from South Asian music-training contexts remains limited. Second, it brings together an intrapersonal evaluative resource (self-esteem), a goal-persistence resource (professional grit), and an interpersonal resource (social acceptance) within one model. This makes it possible to compare their relative statistical contributions rather than discussing each factor in isolation. Third, the study focuses on life satisfaction as a positive well-being outcome. Research on musicians understandably devotes substantial attention to distress, anxiety, and health problems, but positive evaluations of life are also important for understanding sustainable participation in demanding professional training.

At the same time, the study is explicitly exploratory. The sample is small, the design is cross-sectional, and two study-specific measures have weak reliability. Presenting the study in journal form therefore requires balancing the potential contribution of an uncommon population with appropriate restraint about generalization and causality. The hypotheses are treated as tests of association within this dataset rather than definitive statements about all music students.

2. Method

The study used a quantitative, cross-sectional correlational design. The design was appropriate for examining naturally occurring associations among self-esteem, professional grit, social acceptance, and life satisfaction at a single point in time. Because no variables were manipulated and no temporal sequence was established, the design does not support causal inference.

2.1 Participants and sampling

Participants were 60 music students aged 19–30 years ($M = 21.92$) who were recruited from the music department at the Old Campus of the University of the Punjab, the National Music Academy, and Alhamra Arts Council in Lahore, Pakistan. Forty participants were men (66.7%) and 20 were women (33.3%). Most participants were enrolled at the bachelor's level ($n = 52$, 86.7%); three had intermediate-level education (5.0%) and five were at the master's level (8.3%).

Thirty-six participants reported an urban regional affiliation (60.0%) and 24 a rural affiliation (40.0%). Most were single ($n = 57$, 95.0%). Forty-one participants reported a nuclear family system (68.3%) and 19 a joint family system (31.7%). Birth-order groups consisted of two only children (3.3%), 15 first-born participants (25.0%), 31 middle-born participants (51.7%), and 12 last-born participants (20.0%).

Non-probability purposive sampling was used. Participants were eligible if they were currently enrolled as music students, were between 19 and 30 years of age, and studied at a music education institution in Lahore. The source study excluded students who reported a mental disability. The purposive strategy allowed recruitment from a relatively specialized population but limits the representativeness of the sample and therefore the generalizability of the findings.

2.2 Measures

Rosenberg Self-Esteem Scale. Global self-esteem was assessed with the 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1965). Participants responded on a four-point Likert-type scale, and negatively worded items were reverse-scored. Under the scoring procedure used in the study, total scores could range from 10 to 40, with higher scores indicating higher self-esteem. In the present sample, Cronbach's alpha was .643.

Satisfaction With Life Scale. Life satisfaction was measured using the five-item Satisfaction with Life Scale (Diener et al., 1985). Items were rated on a seven-point scale from 1 (strongly disagree) to 7 (strongly agree), giving a potential total range from 5 to 35. Higher scores indicate greater global life satisfaction. Cronbach's alpha in the present sample was .640.

Professional Grit Scale. Professional grit was assessed using a 12-item measure adapted from the original Grit Scale (Duckworth et al., 2007) to reflect perseverance and long-term commitment in relation to the participants' professional direction. Items were rated on a five-point scale, producing a potential range from 12 to 60. Higher scores indicated greater professional grit. The internal consistency coefficient in this sample was low ($\alpha = .397$), so findings involving this measure should be regarded as exploratory.

Social Acceptance Scale. Perceived social acceptance was measured with a self-constructed 14-item scale designed for the source study. Items were rated on a five-point Likert-type scale, with a potential total range of 14 to 70. Higher scores reflected greater perceived acceptance. Cronbach's alpha was .419, indicating low internal consistency. Because the scale was not an established validated instrument and reliability was weak, the observed associations involving social acceptance require replication with a psychometrically stronger measure.

Demographic questionnaire. A demographic sheet collected information about age, gender, education, regional affiliation, family system, marital status, and birth order, along with additional background variables. Only variables relevant to the present analyses are reported in this article.

2.3 Procedure and ethical considerations

Formal permission to conduct the study was obtained from the Department of Applied Psychology and the relevant academic authorities identified in the source manuscript. Eligible students were informed about the study purpose and procedures before participation. Written informed consent was obtained, participation was voluntary, and students were informed that they could decline or withdraw without penalty. Questionnaires were administered in person and required approximately 10–15 minutes to complete. Confidentiality and anonymity were emphasized, and results were reported in aggregate form.

The questionnaire package included the demographic form, Satisfaction with Life Scale, Rosenberg Self-Esteem Scale, Professional Grit Scale, and Social Acceptance Scale. The present article does not add new participant data or reanalyze raw data beyond the statistics reported in the source manuscript; rather, it reorganizes and reports the existing study in a journal-article format.

2.4 Statistical analysis

Data were analyzed in SPSS version 21. Descriptive statistics and Cronbach's alpha coefficients were calculated for all study variables. Pearson product-moment correlations were used to

examine bivariate associations among self-esteem, professional grit, social acceptance, and life satisfaction. A multiple linear regression model was used to examine the joint statistical contribution of self-esteem, professional grit, and social acceptance to life satisfaction. Independent-samples *t* tests examined gender differences. One-way analyses of variance examined birth-order differences across four groups. Statistical significance was evaluated at $p < .05$. Because the sample was small and several reliability estimates were below conventional standards, the analyses are best interpreted as exploratory. The article therefore emphasizes effect patterns and measurement limitations rather than making strong population-level claims.

3. Results

The analyses proceeded from descriptive statistics and reliability estimates to bivariate correlations, regression, and group comparisons. The results are reported using the numerical values available in the source manuscript. Where the original tables contained formatting errors, values were reorganized without changing the underlying reported means, standard deviations, correlations, regression coefficients, *t* statistics, *F* statistics, or *p* values. For the birth-order ANOVAs, the degrees of freedom were corrected to *F* (3, 56), which is consistent with four birth-order groups and *N* = 60 and reproduces the reported *p* values.

3.1 Descriptive statistics and reliability

Mean self-esteem was 22.45 (*SD* = 3.71), mean professional grit was 32.50 (*SD* = 4.57), mean social acceptance was 35.96 (*SD* = 4.76), and mean life satisfaction was 14.96 (*SD* = 4.49). Reliability coefficients ranged from .397 to .643. Self-esteem ($\alpha = .643$) and life satisfaction ($\alpha = .640$) showed internal consistency below the commonly used .70 guideline, while professional grit ($\alpha = .397$) and social acceptance ($\alpha = .419$) showed substantially weaker internal consistency. These coefficients are important for interpreting the remaining analyses because unreliability can weaken, distort, or destabilize observed relationships.

Table 1

Participant characteristics

Characteristic	n	%
Gender: Men	40	66.7
Gender: Women	20	33.3
Education: Intermediate	3	5.0
Education: Bachelor's	52	86.7
Education: Master's	5	8.3
Regional affiliation: Rural	24	40.0
Regional affiliation: Urban	36	60.0
Marital status: Married	3	5.0
Marital status: Single	57	95.0
Family system: Nuclear	41	68.3
Family system: Joint	19	31.7
Birth order: Only child	2	3.3
Birth order: First born	15	25.0
Birth order: Middle born	31	51.7
Birth order: Last born	12	20.0

Note. Participants were aged 19–30 years (*M* = 21.92). The source manuscript reported an age *SD* that

appeared inconsistent with the stated range, so it is not reproduced here.

Table 2

Descriptive statistics and internal consistency of study variables

Variable	M	SD	Observed range	Potential range	α
Self-esteem	22.45	3.71	13–30	10–40	.643
Professional grit	32.50	4.57	21–39	12–60	.397
Social acceptance	35.96	4.76	26–47	14–70	.419
Life satisfaction	14.96	4.49	7–28	5–35	.640

Note. α = Cronbach’s alpha. Reliability is below conventional levels for all four measures and particularly low for professional grit and social acceptance.

3.2 Correlations among study variables

Professional grit showed statistically significant positive correlations with social acceptance ($r = .33$, $p < .01$), life satisfaction ($r = .32$, $p = .013$), and self-esteem ($r = .33$, $p = .011$). Social acceptance had the strongest bivariate relationship with life satisfaction ($r = .68$, $p < .01$). Self-esteem was positively but not significantly associated with social acceptance ($r = .22$) and life satisfaction ($r = .20$). Thus, the first hypothesis received partial support: professional grit and social acceptance were significantly associated with life satisfaction, but the self-esteem–life satisfaction correlation was not statistically significant in this sample.

Table 3

Correlations among study variables

Variable	1	2	3	4
1. Professional grit	—	.33**	.32*	.33*
2. Social acceptance		—	.68**	.22
3. Life satisfaction			—	.20
4. Self-esteem				—

Note. * $p < .05$. ** $p < .01$.

3.3 Multiple regressions predicting life satisfaction

Self-esteem, professional grit, and social acceptance were entered simultaneously into a multiple linear regression predicting life satisfaction. The overall model was statistically significant and explained 46.9% of the variance in life satisfaction ($R^2 = .469$, $F = 16.48$, $p < .001$). Social acceptance was the only significant positive predictor ($B = .60$, $p < .001$). Self-esteem ($B = .03$) and professional grit ($B = .09$) did not make statistically significant unique contributions after the other variables were included. The joint-prediction hypothesis was therefore supported at the model level, but the predictor-specific results indicated that the model’s explanatory power was primarily associated with social acceptance.

Table 4

Multiple regression predicting life satisfaction

Predictor	B	Significance
Self-esteem	.03	ns
Professional grit	.09	ns
Social acceptance	.60	< .001

Note. Model $R^2 = .469$; $F = 16.48$, $p < .001$. Exact p values for the two nonsignificant individual

coefficients were not available in the source table; they are therefore reported as ns rather than estimated.

3.4 Gender and birth-order comparisons

Independent-samples *t* tests showed no statistically significant gender differences in professional grit, social acceptance, life satisfaction, or self-esteem. Men and women reported very similar levels of social acceptance and self-esteem; women had slightly higher mean professional grit and life satisfaction, but the differences were small and nonsignificant. Effect sizes were also small ($|d| = .01-.28$).

One-way ANOVAs showed no statistically significant differences across birth-order groups for professional grit, social acceptance, life satisfaction, or self-esteem. The only-child group contained only two participants, making its mean particularly unstable. Consequently, the absence of significant differences should not be interpreted as strong evidence that birth order is unrelated to the study variables in the broader population.

Table 5

Gender differences in study variables

Variable	Men M (SD)	Women M (SD)	<i>t</i>	<i>p</i>	$ d $
Professional grit	32.22 (4.48)	33.05 (4.82)	-0.655	.515	.17
Social acceptance	35.95 (5.07)	36.00 (4.20)	-0.038	.970	.01
Life satisfaction	14.52 (4.25)	15.85 (4.93)	-1.07	.286	.28
Self-esteem	22.57 (3.44)	22.20 (4.28)	0.366	.716	.09

Note. Men *n* = 40; women *n* = 20. $|d|$ = absolute Cohen's *d*.

Table 6

Birth-order differences in study variables

Variable	Only child <i>n</i> =2	First born <i>n</i> =15	Middle born <i>n</i> =31	Last born <i>n</i> =12	<i>F</i> (3,56)	<i>p</i>
Professional grit	37.00 (0.00)	32.80 (4.21)	31.77 (5.05)	33.25 (3.76)	1.034	.385
Social acceptance	39.00 (0.00)	35.73 (3.76)	36.41 (5.45)	34.58 (4.27)	0.700	.556
Life satisfaction	17.00 (0.00)	14.26 (4.31)	15.38 (4.72)	14.41 (4.64)	0.395	.757
Self-esteem	26.00 (0.00)	21.73 (3.19)	22.83 (3.62)	21.75 (4.59)	1.055	.376

Note. The degrees of freedom are reported as *F*(3, 56), which is consistent with four groups and *N* = 60 and reproduces the *p* values in the source analysis. The only-child group is too small for stable inference.

4. Discussion

This exploratory study examined whether self-esteem, professional grit, and social acceptance were related to life satisfaction among music students in Lahore. The clearest pattern was the importance of social acceptance. Social acceptance had a strong positive bivariate association with life satisfaction and was the only statistically significant predictor when all three psychosocial variables were considered simultaneously. Professional grit was positively related

to life satisfaction, self-esteem, and social acceptance, but its unique regression contribution was not significant. Self-esteem showed positive but nonsignificant bivariate associations with life satisfaction and social acceptance. No significant gender or birth-order differences were observed. The prominence of social acceptance is consistent with a growing body of research that places relationships, belonging, and support at the center of student well-being. Avcı (2023) found that university belonging and social connectedness were linked to life satisfaction. Mo et al. (2024) similarly showed that social support provided important pathways connecting students' social interaction with life satisfaction. Within Pakistan, Iqbal et al. (2023) found that social capital was positively associated with happiness among university students in Punjab. Although social capital, social support, belonging, and social acceptance are not identical constructs, they converge on the idea that well-being is partly relational: students evaluate their lives more positively when they experience meaningful inclusion and dependable social ties.

This interpretation may be especially relevant for music students. Music training involves repeated exposure to social evaluation. Students are assessed not only through written examinations but also through auditions, performances, ensemble interactions, lessons, and judgments of artistic quality. The same social environment can therefore provide both stress and affirmation. Recent music-student evidence supports this dual role. Vengurlekar et al. (2024) showed that music-specific stress was associated with internalizing symptoms and that support from figures such as ensemble directors could be protective under some conditions. McGoldrick et al. (2025) linked perceived social support with better mental health among college music students. Ege et al. (2023) found that students themselves viewed social support and shared musical experiences as health resources. The strong association between social acceptance and life satisfaction in the present study is therefore plausible within the broader ecology of music education.

Sociometer theory provides one way to understand the pattern. Leary et al. (1995) proposed that self-esteem functions partly as a monitor of relational value. If students perceive that they are accepted and valued, this may support both a sense of belonging and a more favorable evaluation of life. Interestingly, however, self-esteem was not significantly associated with life satisfaction in the present sample once considered directly, even though recent larger studies generally show positive links between the two constructs. Garnique-Hinostroza et al. (2024) found that positive self-esteem predicted life satisfaction among university students, and Chan and Huang (2024) found that self-esteem helped transmit the relationship between hope and life satisfaction. Tu and Fu (2024) also identified self-esteem as part of the pathway connecting music engagement with subjective well-being in music students.

Several explanations may account for the weaker self-esteem result here. The first is measurement. The Rosenberg scale showed an alpha of .643 in this sample, which is below the level typically preferred for research interpretation. The second is statistical overlap. If perceived social acceptance carries information about relational value that is also reflected in self-esteem, entering both variables into a regression may reduce the unique contribution of self-esteem. The third is sample size. With only 60 participants, modest relationships may not reach statistical significance. The present findings therefore should not be interpreted as evidence that self-esteem is unimportant for music students; rather, they indicate that self-esteem did not emerge as a distinct statistical predictor in this particular dataset.

The grit findings are also broadly consistent with contemporary research. Professional grit was positively associated with life satisfaction at the bivariate level. This echoes the Pakistani evidence of Ain et al. (2021), who found a positive but modest association between grit and life satisfaction among undergraduates, and the Chinese findings of Liu et al. (2022), where grit was positively associated with life satisfaction and indirectly linked through depression. Broader models in higher education likewise suggest that grit can support well-being through motivational and adaptive pathways. Lozano-Jiménez et al. (2021) connected grit with basic psychological needs, intrinsic motivation, group cohesion, and life satisfaction; Ramos Salazar and Meador

(2023) linked grit with well-being through self-control; and Noronha et al. (2024) found that academic adaptation mediated substantial parts of the grit–life satisfaction relationship. At the same time, the absence of a unique grit effect in the regression is not surprising. Grit is not a uniformly strong predictor of all outcomes, and meta-analytic evidence has shown considerable overlap with conscientiousness (Credé et al., 2017). In music education, persistence may also have a nonlinear or context-dependent relationship with well-being. Czerwiński et al. (2023) demonstrated that perseverance of effort can become maladaptive among music academy students when combined with study addiction. Music students often face strong norms of dedication, long practice hours, and sacrifice; consequently, persistence may contribute to well-being when it reflects purposeful, self-endorsed striving but not when it becomes rigid or compulsive. The low reliability of the professional grit measure in the present study ($\alpha = .397$) further limits the strength of any conclusion about the construct.

The study's results can also be understood in relation to recent research on the positive potential of musical engagement. Fu and Tu (2023) found that music lessons improved subjective well-being among university students, and Tu and Fu (2024) linked music engagement with subjective well-being through self-esteem and prosocial tendencies in music students. Fang and Chen (2025) likewise found positive associations between music classes and psychological well-being in a large student sample. These studies suggest that music-related experiences can support well-being, but the benefits are likely shaped by the surrounding social and educational context. A technically demanding learning environment may produce very different psychological outcomes depending on whether students feel supported, respected, and connected.

The lack of significant gender differences should be interpreted cautiously. The sample included twice as many men as women, reducing precision for gender comparisons. The observed differences were small, and no variable approached conventional statistical significance. Recent student well-being research often finds that gender differences depend on the specific construct, cultural context, and stressor rather than following a single consistent pattern. The present results therefore contribute a descriptive observation rather than strong evidence of equivalence between men and women.

Birth-order differences were also nonsignificant. In this case, the unequal group sizes create an even stronger limitation: only two participants were only children, compared with 31 middle-born participants. One-way ANOVA is not well suited to drawing stable group conclusions when one group is extremely small. The corrected degrees of freedom, $F(3, 56)$, reproduce the p values reported in the source analysis, but the group comparisons should still be treated as exploratory. Future studies could omit birth order unless a specific theoretical rationale and adequate group sizes are available.

4.1 Theoretical implications

The study supports a relational interpretation of music-student well-being. Personal resources such as grit and self-esteem remain relevant, but the strongest observed association involved perceived social acceptance. This pattern is compatible with theories emphasizing belonging and relational value and with current research on social support in music education. The result also suggests that models of music-student well-being may benefit from moving beyond purely individual explanations. Persistence, confidence, and coping operate within environments that provide or withhold recognition, mentorship, peer support, and opportunities for meaningful participation.

The findings also illustrate why grit should be integrated into a broader psychosocial model rather than treated as a stand-alone trait. Grit was related to multiple positive variables, but it did not independently explain life satisfaction after social acceptance was considered. Contemporary grit research increasingly points to such contextual pathways. Academic adaptation, self-control, need satisfaction, and social cohesion may determine when persistence translates into well-being (Lozano-Jiménez et al., 2021; Noronha et al., 2024; Ramos Salazar & Meador, 2023). In music education, where commitment is often exceptionally high, understanding the quality and context

of persistence may be more informative than simply asking whether a student is “gritty.” Finally, the study highlights the conceptual proximity between self-esteem and social acceptance. Sociometer theory predicts that self-esteem is responsive to perceived relational value, yet the two variables need not have identical statistical effects. Future research could test whether self-esteem mediates the relationship between acceptance and life satisfaction, whether acceptance moderates the effects of music-related stress, or whether teacher and peer support contribute differently to self-esteem and life satisfaction.

4.2 Practical implications

The findings point toward several practical directions for music education institutions, although the evidence is exploratory and should not be treated as proof of intervention effectiveness. First, student well-being initiatives should not focus exclusively on individual coping skills. Programs that strengthen peer connection, respectful teacher–student relationships, mentoring, ensemble climate, and inclusive participation may be particularly relevant. Recent studies of music students indicate that support from instructors, peers, and the wider educational environment can shape how students experience stress and mental health (McGoldrick et al., 2025; Vengurlekar et al., 2024).

Second, institutions can frame persistence in healthier ways. Students benefit from sustained effort, but music education should distinguish adaptive commitment from compulsive overwork. Guidance on practice planning, recovery, realistic career development, and help-seeking may allow students to maintain long-term commitment without equating exhaustion with professionalism. The findings of Czerwiński et al. (2023) are especially relevant here because they show that perseverance can coexist with maladaptive study patterns among music academy students.

Third, music programs in Pakistan may benefit from explicit attention to social legitimacy and professional identity. Students who perceive that their field is respected and that they belong within a supportive artistic community may experience greater satisfaction even when career uncertainty remains. This implication is consistent with local evidence linking social capital with happiness among students in Punjab (Iqbal et al., 2023), but it should be tested directly in larger music-student samples.

4.3 Limitations and future research

The study has several important limitations. The most serious concerns involve measurement. Professional grit ($\alpha = .397$) and social acceptance ($\alpha = .419$) showed low internal consistency, while self-esteem ($\alpha = .643$) and life satisfaction ($\alpha = .640$) were also below the conventional .70 guideline. Low reliability can attenuate correlations and can make regression coefficients unstable. The social acceptance measure was self-constructed and its factor structure and validity were not established in the source study. Future research should use validated instruments for perceived social acceptance, belonging, or social support and should carefully adapt and validate any profession-specific grit measure before testing substantive hypotheses.

Second, the sample was small ($N = 60$) and selected purposively from three Lahore-based settings. The findings cannot be assumed to represent music students across Pakistan, other age groups, conservatories, universities, or professional musicians. Replication should use substantially larger samples from multiple institutions and regions. Probability sampling may not always be practical in specialized music populations, but broader multi-site recruitment would improve generalizability.

Third, the cross-sectional design prevents conclusions about directionality. Social acceptance may contribute to life satisfaction, but students who are more satisfied with life may also perceive their relationships more positively. Similarly, grit may support adaptation, or successful adaptation may reinforce persistence. Longitudinal research could clarify temporal ordering, while multi-wave models could test whether changes in social acceptance predict later changes in life satisfaction.

Fourth, all variables were measured through self-report. Shared method variance, response style,

and social desirability may therefore have influenced the results. Future work could incorporate peer or teacher reports, behavioral indicators of engagement, objective educational outcomes, or qualitative interviews to capture the lived experience of acceptance and professional persistence. Fifth, the gender and birth-order analyses had limited power. The sample contained 40 men and 20 women, and the birth-order groups were highly unequal. In particular, the only-child group contained two participants. Future studies should preplan subgroup analyses and recruit adequate numbers in each category. Unless birth order is central to a clearly articulated theory, it may be more useful to devote statistical power to variables with stronger contemporary relevance, such as teacher support, peer belonging, music performance anxiety, career uncertainty, financial strain, or perceived professional legitimacy.

Finally, recent literature suggests that well-being among music students is multidimensional. Life satisfaction captures an important cognitive component but does not directly measure anxiety, depression, flourishing, meaning, or performance-related distress. Future studies could test integrated models that include both positive and negative outcomes and examine whether social acceptance protects students against music-specific stress. Such work would better connect the Pakistani context with the expanding international literature on musicians' health and well-being.

5. Conclusion

This study provides an exploratory account of self-esteem, professional grit, social acceptance, and life satisfaction among music students in Lahore. The strongest finding was the relationship between social acceptance and life satisfaction: students who reported greater perceived acceptance also reported greater satisfaction with life, and social acceptance was the only significant predictor when self-esteem and professional grit were considered simultaneously. Professional grit showed smaller positive associations with life satisfaction, self-esteem, and social acceptance, while self-esteem was not significantly related to life satisfaction in this sample. Gender and birth-order differences were not statistically significant.

The findings are consistent with recent research emphasizing the role of belonging, support, and relational resources in student and musician well-being. They also suggest that persistence alone may be insufficient for understanding how music students evaluate their lives. However, the conclusions are necessarily tentative because of the small purposive sample and the low reliability of several measures. Replication with validated instruments, larger multi-institutional samples, and longitudinal designs is essential before firm conclusions can be drawn. Within these limits, the study highlights social inclusion as a promising area for future research and student-support initiatives in music education.

Ethics statement

The source manuscript reports that permission was obtained from the relevant academic authority, participants were informed about the purpose and procedure of the study, written informed consent was obtained, participation was voluntary, and confidentiality and anonymity were maintained.

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