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EMPLOYMENT STATUS AND PSYCHOLOGICAL ADJUSTMENT: DIFFERENCES IN ADVERSE CHILDHOOD EXPERIENCES, EMOTIONAL REGULATION, AND HEALING

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ABSTRACT

The people (Khawaja Sira) in Pakistan are seeking formal employment, but this group is especially economically vulnerable. No published research has explored how employment may impact the psychological well-being of this population. This study seeks to find adverse childhood experiences (ACEs), and emotion regulation and psychological healing, of Khawaja Sira adults employed in various ways in Pakistan. The sample (N = 200, M age = 32.8, SD = 8.9) consisted of the adults who completed Urdu-language measures of ACEs, emotion regulation, and psychological healing. The Experience of Healing Scale (EHS) was used. The overall MANOVA was significant, Wilks' Λ =.869, F (15, 530.43) = 1.85, p =.026. Post-hoc analysis revealed employment status accounted for differences in ACE burden, F (5, 194) = 2.94, p = .014, η^2 = .070; emotion regulation, F (5, 194) = 3.23, p = .008, η^2 = .077; and healing, F (5, 194) = 2.61, p = .026, η^2 = .063. The individuals in informal-employment status differed from those in informal-work & student status on all outcomes. The employment status based on occupation type was not significant for any outcome. The type and level of formality of employment is a key factor in the psychological adjustment & warrants further attention in both research and interventions.

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INTRODUCTION

The Khawaja Sira include trans women, trans men, nonbinary, and other members of the intersex community in Pakistan, and continue to be one of the most economically vulnerable communities in Pakistan. Several studies find extremely low levels of formal employment and literacy amongst this community, with the majority sustaining themselves through begging or engaging in informal

& unprotected occupation, most commonly dance performances (Sultan, Mehmood, Ahmed, Tahira, Rahim & Farhan, 2020). The studies describe additional layers of socioeconomic challenges faced by this community such as unstable or no housing, insufficient access to health care, and precarious employment (Ali & Ashraf, 2026). While literature describes effects of economic vulnerability, they have not examined psychological effects of economic in exclusion. Have the psychologically and emotionally abused considered employment status and informality of it in type and measure of childhood trauma sustained, emotional control, as they are on continuum of healing? Qualitative approaches have limits, but this work has found "perceived stigma" as one of three core dimensions of discrimination, community faces, with internalized shame and exclusion from family, school, and healthcare systems.

This work also makes clear that stigma and employment together are particularly important for this community, and that for many, the failure to secure employment is one of the more pronounced expressions of stigma. The extent to which this is true remains to be investigated over quantitative studies. Negative experiences before the age of 18, such as abuse and neglect, are associated with poor mental and physical health in adult populations. For Khawaja Sira, childhood is characterized by the loss of family support system due to their gender nonconforming behavior. As such, Khawaja Sira are especially vulnerable to high levels of cumulative early adversity. Whether experience of cumulative early adversity remains problematic, as a source of distress, or heals, and is transformed into a healthy and adaptive experience, is conditioned by quality of social and physical resources available to the individual. Stable employment is one of most important resources in this respect. Minority stress theory forms the basis of this link. Meyer (2003) differentiates psychological distress among sexual and gender minorities from the stress of marginalization by the exposure to chronic discrimination and social exclusion as well as internalization of the stigma by individual and their anticipated rejection.

Hendricks and Testa (2012) built on this differentiation, explaining that, for the transgender and gender non-conforming individuals, domains of employment have been recurring sites of exposure to chronic social exclusion by way of hiring discrimination and workplace harassment or social exclusion from the formal labor market. Thus, the place of a Khawaja Sira person in the employment structure is not only an economic issue; within Minority Stress Theory, it indicates their exposure to, or protection from, one of chronic social exclusions this community endures. Most general literature outside gender-minority research confirms hypothesis employment status impacts mental health. A meta-analysis covering 237 cross-sectional and 87 longitudinal studies found individuals in the sample who were unemployed reported significantly more psychological distress than employed individuals ($d = 0.51$), and this effect was more pronounced in less economically developed countries with weaker unemployment protections. This describes the situation of Pakistan's informal labor sector. In this linking, the question that still remains, however, is whether this is the case for Khawaja Sira, and whether the psychological impact comes from employment status, or from the particular kinds of the work.

This study fills a gap in existing literature by incorporating data from larger study focused on ACEs, emotion regulation, and psychological healing of Khawaja Sira community in Pakistan [reference

here when manuscript becomes available]. This study does not rebuild the primary mediation model, but analyzes employment status as an independent variable, assessing the relationship of all three constructs through multivariate analysis, performing appropriate robustness checks based on the data's distributional characteristics, and, for the first time, assessing whether the same variance is explained by finer variable of the work type (dance performance, begging, formal employment, beauty-parlor employment), or whether effect is specific to form of employment. Thus, employment status is closely associated with psychological adjustment and emotional well-being. We expected (1) employment status would differentiate ACE burden, emotion regulation, and psychological healing, as well as individual constructs, with informal or unstable employment resulting in poorest adjustment and (2) this effect would be attributed to formality of the employment, rather than the specific occupation.

LITERATURE REVIEW

Many Khawaja Sira moved from occupation to occupation based on fluctuating political climate during rule of South Asian Empires. Khawaja Sira retained considerable amount of organizational and social respect. British colonial powers changed that by using the Criminal Tribes Act of 1871 to legally classify Khawaja Sira as criminal tribes. In this regard, the social and economic exclusion and stigmatization that followed from classification persists (Mahesar, Anjum, Shoib & Ventriglio, 2025). After that, legal recognition of Khawaja Sira has been slow. The 2018 Transgender Persons (Protection of Rights) Act in Pakistan legally recognized a third gender, but Nisar (2018) found that most Khawaja Sira continued to register as men. The economic costs of claiming the third gender remained greater than claiming men's, weighing the perceived benefits of legal recognition. The third gender legal recognition and reforms legislation have not translated to economic inclusion. The informal and precarious position of the work examined in this study is in part attributed to the exclusion that Khawaja Sira experience across their life course. Alizai, Doneys and Doane (2017) further found that Khawaja Sira experienced family rejection, interruptions in the schooling, and harassment as youth.

The entire phenomenon directed Khawaja Sira to very restricted range of occupations even before adulthood. Moreover, discrimination Khawaja Sira experience follows them when they venture into other institutions. Manzoor, Khan, Tariq & Shahzad (2022), a majority of transgender patrons in Lahore reported that health care providers dehumanized and neglected them. Ahmad, Banuri and Bokhari (2024) documented that Khawaja Sira clients, using symptoms that were identical to cisgender clients, received worse care at private clinics in Lahore. Discrimination served worse and dehumanizing care at private clinics. Sani, Mehmood, Jamal, Mukhtar and Ullah (2023), Mahesar et al. (2025), and Zubair (2021) reported increased depression, anxiety, and suicidal thinking in community and attributed these findings to same structural barriers in health care, education, and employment as employment status variable in study. Zambrano notes that with historic inequity in health care, COVID-19 pandemic has negatively impacted health care disparities. Zubair (2021) describes an increase amid all communities in depression, anxiety, and suicidal thinking and notes direct correlation to high levels of structural barriers found in health care and in access to education as well as employment.

The citing discrimination and anticipation of rejection as primary drivers, Meyer's (2003) minority stress model remains the primary framework for disproportionate mental health burden of sexual and gender minorities. Hendricks and Testa (2012) extend Meyer's (2003) model to transgender and gender-nonconforming populations, arguing that gender-related stigma exists along the same distal-to-proximal continuum as other forms of discrimination, but that it includes specific forms of gender-related stress such as mistreatment (misgendering) and the absence of legal recognition. Testa et al. (2015) define this model and assess it in Gender Minority Stress and Resilience measure. In this measure, they distinguish distal stressors (e.g. discrimination, rejection, victimization, non-affirmation) from proximal stressors (internalized transphobia, adverse expectations, concealment), and define community connectedness and identity pride as the self-directed resilience resources that are not merely the absence of stress. In his later models, Meyer (2015) continues to shift this model more toward the protective factors. Thus, he posits that, on the individual level, resilience is built through the person's self-worth, as well as collective level through peer support along with community inclusion.

Bockting, Miner, Swinburne, Hamilton and Coleman (2013) in one of the larger community surveys, interviewed transgender adults in US, and found that peer support from other transgender persons mitigated the relationship between stigma and psychological distress, supporting the group-level resilience model that Meyer (2015) later formalized. Read in combination, these papers provide a unique perspective on relationship between hiring and harassment and presence of a workspace structure and routines as well as feelings of belonging. This relationship is what my study will test using the Khawaja Sira research on the employment. The workers are more concerned with their employment status than with many other variables. Thus, the discrimination workers experience because of their lack of employment is a predictor of their psychological well-being. In regard to Pakistan, Paul and Moser (2009) published a meta-analysis on distress levels of unemployed vs employed individuals. Their findings were used to show negative levels of the psychological well-being in employed vs unemployed individuals. In regard to the informal labor sector of Pakistan, they noted that distress levels increased in the lack of formal employment & unfair practices of the Pakistani governments.

Ryan, Song, Wanberg and Kinicki (2005) noted that most of the studies they examined identified a loss of formal employment and a loss of well-being that was not solely due to the loss of income, but a loss of coping resources, and role and social contact. Transgender individuals working in an inequitable and discriminatory workplace encounter more depressive symptoms than cisgender workers. In line with this literature, the distinctions of present study between formal and informal employment, working and presence and absence of informal employment, resonates with formal employment and structures and coping mechanisms. Ryan et al. (2005) described that cumulative exposure to adversities predicted a substantial burden of adult disease (Felitti et al. 1998). Research indicates that sexual and gender minorities report more of these types of abuse, neglect, and family dysfunction than their cisgender and heterosexual counterparts. Schnarrs et al. (2019) conducted a study comparing transgender and cisgender sexual minority adults, and distinctively reported that transgender respondents experienced greater incidences of emotional abuse & emotional neglect,

which are more indicative of abandonment and rejection of their gender identity than from typical family hardships.

Ryan et al. (2009) documented one of the first studies that captured a model of family rejection of LGBT young adults. The influencing variable was family rejection during adolescence on ligament of the young adult as the model documented that family rejection of nonconformists was directly associated with depression, suicide, and substance use, and therefore family rejection and gender nonconformity is directly associated with adverse childhood exposure. Balakrishnan et al. (2024) studied the relationship of ACE burden and depression among adult transgender and cisgender populations. For Khawaja Sira, whose gender nonconformity is evident in childhood and whose disclosure results in the family rejecting them even before adolescence, the research suggests that the ACE burden seen in this sample can be attributed to gender identity, and not be a coincidence. Rather, burden is likely to be the result of same family-rejection pathway seen in Western studies, and is likely to occur earlier and for a longer period of time. Gross's (1998) process model of emotion regulation labels five stages where people intervene in emotive responses by choosing or changing emotional situations, by diverting attention, by reinterpreting emotional event, or by controlling emotional expressions.

The gross maintains that the ability to choose the suitable emotion regulation strategy in a situation is an adaptive skill. Early adversity, especially chronic adversity, disrupts this ability. Children who grow up in an unstable or a rejected environment, have fewer opportunities to practice emotional reappraisal & resort to emotional suppression which gross, among others, has found to be ineffective way to cope, compared to emotional reappraisal. This model provides a compelling explanation of the emotion regulation as an intermediate goal of ACE burden and healing in the broader project this study is embedded in, and not as a goal that is totally disconnected from the rest of the literature of resilience somewhat supports this scale's structure. Meyer (2015) noted resilience in marginalized groups is not solely absence of distress, it is presence of social & community support, connectedness, and pride in an identity that is stigmatized, those constructs would later be included in Testa et al.'s (2015) resilience subscales. Bockting et al. (2013) found in their sample of the US, that peer support (contact with other transgender people) lessened burden of psychological distress due to stigma, which coincides with social and emotional support factor of experience of healing scale employed in the current study.

This body of literature provides a rationale to pursue healing as a construct separate from the absence of ACE pathology in Khawaja Sira, and is consistent with this study's finding that healing, as with ACE burden and emotion regulation, was tracked by formal employment and not by the type of occupation (Sultan et al., 2020; Ali & Ashraf, 2026; Azhar et al., 2024). The second strand, minority stress research (Meyer, 2003, 2015; Hendricks & Testa, 2012; Testa et al., 2015), provides a theoretical account of the relationship between employment and mental health but hasn't been tested with data. The third strand, ACE, emotion regulation, and resilience research in other gender minority of populations (Felitti et al., 1998; Schnarrs et al., 2019; Ryan et al., 2009; Gross, 1998; Bockting et al., 2013), provides much validated measures and mechanisms, although this research has been primarily conducted with North American and European populations. The third strand of

research has not been applied to the South Asian population. The aim of study is to test these three strands for first time in South Asia to examine whether for Khawaja Sira in Pakistan, formalization of employment, and not the type of employment, affects ACE burden, emotional regulation, and psychological healing.

RESEARCH METHODOLOGY

This study employed cross-sectional, between-groups comparative design, nested in a larger study focusing on ACEs, emotion regulation, and psychological healing of the Khawaja Sira community in Pakistan. In this connection, the employment status was between-groups independent variable, and ACE burden, emotion regulation, as well as the psychological healing were the dependent variables in study.

Participants of Study

Khawaja Sira adults, age 32.8 years (SD = 8.9), range 18–58, totaling 200, served as participants. Khawaja Sira community gender-identity subgroup was composed of the following percentages: trans woman, 89 (44.5%); trans man, 39 (19.5%); Khawaja Sira, 38 (19.0%); non-binary, 34 (17.0%). Most participants resided in urban settlements (n = 155, 77.5%). These settlements were distributed in the following Punjab province cities like Bahawalpur, Faisalabad, Gujranwala, Lahore, Multan, Rawalpindi, Sargodha& Sialkot. The remaining 45 (22.5%) participants were from rural settlements. Participants for analysis were categorized into six employment types as reported by participants. These employment types included formal job (n = 50, 25.0%), informal job (n = 38, 19.0%), informal employment (n = 37, 18.5%), self-employed (n = 30, 15.0%), unemployed (n = 29, 14.5%), and student (n = 16, 8.0%).

Measures of Study

Adverse Childhood Experiences. Adversity during childhood was captured using the Urdu version of the Adverse Childhood Experiences Scale (Felitti et al., 1998) and was assessed by calculating a total score across all ten original ACE items. Emotion Regulation. The Urdu version of the Emotion Regulation Questionnaire (Khan & Kausar, 2014) assessed the ability to regulate emotions. Higher scores indicate greater adaptive regulation. Psychological Healing. Healing was assessed with the Experience of Healing Scale (EHS), a 20-item, four-factor measure (social and emotional support; personal development and healthy routines; merged spirituality/coping/resilience factor), using a four-phase mixed-methods procedure specifically for this population. The confirmatory factor analysis suggested the four-factor structure (CFI = .960, RMSEA = .040) with the strong internal consistency (α = .860–.916) and 10-day test–retest reliability (ICC = .79–.86). Occupation Type. A more detailed, eight-category occupation variable (beauty-parlor work, begging, business, dance performance, regular job, student, unemployed, other) was used in the supplementary analysis to verify if observed differences in employment status could be related to type of occupation rather than its formality.

Data Analysis

Due to the highly intercorrelated nature of ACE, emotion regulation, and healing totals (RS = .72–.85), a one-way multivariate analysis of variance was done first with employment status (six levels) as independent variable, and three totals jointly as dependent variables. The multivariate analysis

eliminates potential for redundancy and inflated Type I errors caused by conducting three separate univariate analyses on highly correlated variables. An overall multivariate effect was reported and was followed by univariate ANOVAs with partial η^2 effect sizes, for each of outcomes. Levene's tests of variance demonstrated there were equal variances for outcomes across all six employment groups (all PS > .18). Shapiro-Wilk tests on ANOVA residuals for all three outcomes indicated non-normality (all PS < .001); however, it should be noted that there were sufficient sample sizes for all three outcomes ($n \geq 16$) and F-test, which is used for ANOVA, is relatively unaffected by moderate non-normality and equal variance. Thus, normal ANOVA results are reported. Welch's ANOVA and Kruskal-Wallis H tests are reported as robustness checks. Tukey HSD was employed for post-hoc tests given equal variances. As a final specificity check, a parallel one-way ANOVA was done where granular occupation-type variable was used. All analyses were conducted in Python (SciPy, statsmodels & Pingouin).

RESULTS OF STUDY

As described in detail above, ACE scores were inversely correlated with emotion regulation ($r = -0.85$), emotion regulation scores were positively correlated with healing ($r = 0.83$), and ACE scores are inversely correlated with healing ($r = -0.72$) across entire sample with statistical significances at $p < 0.001$. Regarding Levene's tests, variances were considered homogeneous for six employment groups for ACE ($W = 1.26$, $p = 0.282$), emotion regulation ($W = 1.19$, $p = 0.318$), and healing ($W = 1.51$, $p = 0.187$). Shapiro-Wilk tests on the ANOVA residuals revealed that all three variables (ACE: $W = 0.94$, $p < 0.001$; regulation: $W = 0.97$, $p < 0.001$; healing: $W = 0.96$, $p < 0.001$) exhibited a departure from normality, and robustness checks are presented below alongside the standard ANOVA results for this reason.

Table 1 Descriptive Statistics of ACE & ER by Employment Status

Employment Status	n	ACE M	ACE SD	ER M	ER SD
Formal Job	50	5.56	3.83	36.42	20.00
Informal Work	38	3.71	3.61	44.53	19.84
Informal Employment	37	6.24	3.49	31.41	17.97
Self-Employed	30	4.53	3.41	42.40	19.98
Unemployed	29	4.24	3.76	44.66	19.03
Student	16	3.50	2.85	47.38	12.61

Note. ACE = Adverse Childhood Experiences; ER = Emotion Regulation; M = mean; SD = standard deviation

Table 1b Healing Totals by Employment Status

Employment Status	n	Healing M	Healing SD
Formal Job	50	78.60	40.35
Informal Work	38	81.82	39.53
Informal Employment	37	64.05	33.43
Self-Employed	30	82.83	39.11
Unemployed	29	85.03	40.30
Student	16	102.50	26.47

Note. Healing total scores range from 20 to 140, with higher scores indicating greater healing. M = mean; SD = standard deviation.

Multivariate & Univariate Results

One-way MANOVA testing employment status compared to joint set of ACE, emotion regulation, and healing outcomes was significant, Wilks' $\Lambda = .869$, $F(15,530.43) = 1.85$, $p = .026$, Pillai's trace = .136, $F(15,582) = 1.84$, $p = .027$. This suggests that employment status distinguishes the pattern of PA for this sample. For univariate follow-up tests & with checks for robustness of Welch's and Kruskal-Wallis, the results are summarized in Table 2. The three outcomes were significant for all tests, supporting the employment-status effect. Thus, this was the case despite the distributional concerns noted previously.

Table 2 Univariate ANOVA, Welch's ANOVA & Kruskal-Wallis

Outcome	ANOVA F (5, 194)	p	η^2	Welch's F	Kruskal–Wallis H
ACE total	2.94	.014	.070	3.07 (5, 77.0), p = .014	14.54, p = .013
Emotion regulation	3.23	.008	.077	3.78 (5, 78.5), p = .004	14.96, p = .011
Healing	2.61	.026	.063	3.99 (5, 77.9), p = .003	12.69, p = .027

Note. η^2 = eta squared, representing the proportion of variance in outcome explained by employment status. p values less than .05 indicate significant differences in employment-status groups. Welch's F is reported as a robust alternative to conventional ANOVA when assumption of homogeneity of variance is violated. H = KW test statistic.

Post-Hoc Comparisons

As per Table 3, informal employment distinguished itself from both informal work and the student group on ACE burden, emotion regulation. Additionally, the informal-employment and informal-work groups differed on healing, although this did not hold Tukey's correction (mean difference = 17.76, p = .329). this comparison aligned with two other measures, with a large pairwise healing gap (behind only the informal-employment-versus-informal-work comparison), even considering the incomplete power.

Table 3 Significant Tukey HSD Post Hoc Comparisons

Outcome / Comparison	Mean Difference	95% CI	p
ACE: Informal employment vs. Informal work	−2.53	[−4.92, −0.15]	.030
ER: Informal employment vs. Informal work	13.12	[0.50, 25.74]	.036
Healing: Informal employment vs. Student	38.45	[5.83, 71.06]	.011

Note. Mean differences are calculated as second-listed group minus the first-listed group. ACE = Adverse Childhood Experiences; ER = Emotion Regulation; CI = confidence interval. HSD = Tukey honestly significant difference test.

Specificity Check: Occupation Type

To understand if the employment-status effect reflects the formality of the type of work done or the particular type of work done, a parallel one-way ANOVA was conducted, with the more specific, eight-category occupation-type variable (beauty-parlor work, begging, business, as well as dance performance, regular job, student, unemployed, other) substituted for six-category employment-status variable. This analysis was non-significant for all three outcomes: ACE, $F(7, 192) = 0.82$, $p = .570$, $\eta^2 = .029$; emotion regulation, $F(7, 192) = 0.94$, $p = .473$, $\eta^2 = .033$; healing, $F(7, 192) = 0.95$, $p =$

.472, η^2 = .033. The loss of significance at a more occupational level, in the presence of a significant effect of the six-category employment-status variable, shows that the type of work performed is less important, in comparison to the formality and structure of the employment, in the adjustment of this sample.

DISCUSSION

This is, to the best of our knowledge, the first quantitative study to examine employment status and psychological adjustment of the Khawaja Sira community in Pakistan. Informal employment was associated with the worst scores of psychological adjustments and the highest burden of ACEs and the worst healing and emotion regulation compared to all other occupational categories, including formal employment and students. The effect sizes were all in the small-to-moderate range (η^2 = .063–.077) and consistent with published employment-status literature (Paul & Moser, 2009). This pattern largely aligns with a minority stress framework (Meyer, 2003; Hendricks & Testa, 2012). For the Khawaja Sira, formal and self-employment may provide some institutional recognition, routine, and social contact that may lessen some of the distal stressors this population faces; informal employment, however, provides neither the safeguards of formal employment nor the autonomy and community engagement that characterize the informal-work category in this sample. With regard to Azhar et al.'s (2024) qualitative work, their participants' perception that Khawaja Sira are unemployable, and that this perception is a distinct form of stigma in itself, may account for this quantitative pattern.

Participants in the informal economy may experience this perception most acutely and may suffer the worst psychological outcomes. The distinction between 'informal employment' and 'informal work' is important because these two categories, both outside the formal labor market, showed very different results. Persons classified under 'informal work' scored close to the formally employed and self-employed participants on three outcomes, as persons classified under 'informal employment' scored as the most burdened by adversity, among the least emotionally regulated, and among the least healed participants in sample. Since no distinction in operational definition was documented between these two labels at the time of data collection, we can only estimate that informal work may capture more autonomous, skill-based, or community-based income sources (for example, the freelance beauty, tailoring, or dance services in community networks), while informal employment may capture exploitative, low-status wage endeavors, with less autonomy and social standing. Clarifying this distinction would be a natural and, in our opinion, the most productive next step in this area of research. Thus, the null result for the more granular occupation-type variable supports this interpretation.

If specific occupations (dance performance, begging, etc.) were each producing poorer adjustment for different groups, we would expect the occupation-type analysis to repeat or exceed the effect sizes for employment status. However, effect disappeared at this level of detail. This demonstrates that, for this population, the type of work Khawaja Sira perform is less important for psychological adjustment than the work's relative social position: formal and protected, informally autonomous, or informally precarious. These results provide new detail to existing descriptions of employment exclusion for this population may experience substantially different psychological conditions,

coping capacities, emotional regulation patterns, and opportunities for recovery from earlier adversity (Sultan et al., 2020; Ali & Ashraf, 2026) and show that employment status is not only about economic hardship. Employment category provides measurable difference in psychological profiles, including on context-specific measurement of healing for this population. Therefore, the employment finding in authors' companion mediation study is also clarified; this effect is specific to informal employment, compared with the informal work in general, and occupation type is not an alternative explanation.

CONCLUSION

For Khawaja Sira in Pakistan, there are clear adverse impacts on childhood experience, emotion, and psychosocial well-being related to the informal nature of employment. Informally employed persons have worst emotional and psychosocial adjustment. This employment-related exclusion has taken on a new form that is not about the type of work, and therefore this informality sharpens and adds to existing knowledge of employment exclusion in this community in diverse situations and circumstances. Such an approach has important implications for the psychological research, employment policy, workplace practice, counseling, and mental health interventions, particularly in developing strategies that promote not only employment but sustainable psychological well-being, emotional resilience, and long-term healing. The most pressing concern is the question of informal employment versus informal work, and this issue needs to be addressed conceptually and with future research.

Limitations

There are a number of limitations to the findings presented. First, the cross-sectional design means that it is impossible to draw the causal conclusions. For example, it is unclear whether there is a restriction in the ability to adjust to formal employment, or whether adaptive problems are caused by the nature of informal employment; only long-term studies could resolve this. Second, the two groups of students (n = 16) and unemployed (n = 29) were fairly small, meaning that the statistical power for pairwise comparison of these specific groups was low, although the main effects were robust across three different forms of analysis. Third, the distinction between informal employment and informal work was clear statistically and descriptively but lacks a clear conceptual definition in the available literature; this be clarified before submission. Fourth, the sample was obtained from eight cities in one province (Punjab) and may not be applicable to other provinces or to Khawaja Sira communities in other regions that are organized differently. Finally, there was residual non-normality in all three outcomes; although the overall conclusions were consistent across the diverse robustness checks, analysis using the non-parametric or bootstrapping methods would strengthen confidence in results.

Implications

Clinically, these results indicate employment status may help inform screening of services for the Khawaja Sira clients, particularly with respect to informally employed, whose childhood histories of unsocialized experience, and resulting inability to regulate emotions, may be of most concern. In terms of programs, these results offer empirical support to vocational training and the provision of formal-employment opportunities, which have been previously advocated, as these may also offer

psychological and not just economic benefits to community. In terms of research, most compelling approach to address employment–adjustment relationship identified here would be longitudinal research. Still, as a first step, a qualitative or mixed-methods study be appropriate and necessary to describe the differences, if any, between informal employment and informal work, as experienced by Khawaja Sira.

REFERENCES

Ahmad, H. F., Banuri, S., & Bokhari, F. (2024). Discrimination in healthcare: A field experiment with Pakistan's transgender community. *Labour Economics*, 87, Article 102490. https://doi.org/10.1016/j.labeco.2023.102490.

Ali, E., & Ashraf, M. (2026). Health disparities and socioeconomic challenges faced by Khawaja Sira (intersex and gender-diverse) community in Islamabad, Pakistan: A descriptive cross-sectional study. *The PLOS Global Public Health*, 6 (7). https://doi.org/10.1371 journal.pgph.0005798.

Alizai, A., Doneys, P., & Doane, D. L. (2017). Impact of gender binarism on hijras' life course and their access to fundamental human rights in Pakistan. *Journal of Homosexuality*, 64(9), 1214–1240. https://doi.org/10.1080/00918369.2016.1242337.

Azhar, S., Ahmad, I., Guzman Herrera, M. M., Tariq, N., & Lerner, R. (2024). "I would prefer to be dead than to live this way": Lived experiences of stigma and discrimination against Khwaja Sira in Swat, Pakistan. *Cambridge Prisms: Global Mental Health*, 11, Article e53. https:// doi.org /10.1017/gmh.2024.53.

Balakrishnan, S., Yang, W., & Weber, A. M. (2024). The interaction of adverse childhood experiences, sex, and transgender identity as risk factors for depression: Disparities in the transgender adults. *Frontiers in the Global Women's Health*, 5, Article 1306065. https://doi.org/10.3389/fgwh.2024.1306065.

Bockting, W. O., Miner, M. H., Swinburne, R. E., Hamilton, A., & Coleman, E. (2013). Stigma, mental health, and resilience in an online sample of US transgender population. *American Journal of Public Health*, 103(5), 943–951. https://doi.org/10.2105/AJPH.2013.301241.

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, 14(4), 245–258. https://doi.org/10.1016/S0749-3797(98)00017-8.

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2 (3), 271–299. https://doi.org/10.1037/1089-2680.2.3.271.

Hendricks, M. L., & Testa, R. J. (2012). A conceptual framework for clinical work with transgender and gender nonconforming clients: An adaptation of the minority stress model. *Professional Psychology: Research & Practice*, 43(5), 460–467. https://doi.org/10.1037/a0029597.

Khan, N., & Kausar, R. (2014). The Emotion Regulation Questionnaire (Urdu adaptation). Research.

Mahesar, R. A., Anjum, R., Shoib, S., & Ventriglio, A. (2025). Mental health of sexual variant people in Pakistan. Sexuality Research and Social Policy. *Advance online publication*. https://doi.org/10.1007/s13178-025-01190-9.

Manzoor, I., Khan, Z. H., Tariq, R., & Shahzad, R. (2022). Health problems & barriers to healthcare services for the transgender community in Lahore, Pakistan. *Pakistan Journal of Medical Sciences*, 38(1), 138–144. https://doi.org/10.12669/pjms.38.1.4375.

Ryan, F. M., Song, Z., Wanberg, C. R., & Kinicki, A. J. (2005). Psychological and physical well-being during unemployment: A meta-analytic study. *Journal of Applied Psychology*, 90 (1), 53–76. https://doi.org/10.1037/0021-9010.90.1.53.

Meyer, I. H. (2003). The prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, 129 (5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674.

Meyer, I. H. (2015). Resilience in the study of minority stress and health of sexual and gender minorities. Psychology of Sexual Orientation and Gender Diversity, 2(3), 209–213. https://doi.org/10.1037/sgd0000132.

Nisar, M. A. (2018). (Un)becoming a man: Legal consciousness of third gender category in Pakistan. *Gender & Society*, 32(1), 59–81. https://doi.org/10.1177/0891243217740097.

Paul, K. I., & Moser, K. (2009). Unemployment impairs mental health: Meta-analyses. *Journal of Vocational Behavior*, 74(3), 264–282. https://doi.org/10.1016/j.jvb.2009.01.001.

Ryan, C., Huebner, D., Diaz, R. M., & Sanchez, J. (2009). Family rejection as a predictor of negative health outcomes in white and Latino lesbian, gay, and bisexual young adults. Pediatrics, 123(1), 346–352. https://doi.org/10.1542/peds.2007-3524.

Sani, S., Mehmood, Q., Jamal, H., Mukhtar, M. U., & Ullah, I. (2023). Raising the alarm: Mental health status of the transgender community in Pakistan. *Asian Journal of Psychiatry*, 79, Article 103360. https://doi.org/10.1016/j.ajp.2022.103360

Schnarrs, P. W., Stone, A. L., Salcido, R., Jr., Baldwin, A., Georgiou, C., & Nemeroff, C. B. (2019). Differences in adverse childhood experiences and quality of physical and mental health between transgender and cisgender sexual minorities. *Journal of Psychiatric Research*, 119, 1–6. https://doi.org/10.1016/j.jpsychires.2019.09.001.

Sears, B., Mallory, C., Lin, A., & Castleberry, N. M. (2024). Workplace experiences of transgender employees. Williams Institute, UCLA School of Law. https://williamsinstitute.law.ucla.edu/wp-content/uploads/Trans-Workplace-Discrimination-Nov-2024.pdf.

Sultan, S., Mehmood, B., Ahmed, Z., Tahira, K., Rahim, M., & Farhan, F. (2020). Health and educational issues of transgender (Khawaja-Siras) in Pakistan. *Journal of Khyber College of Dentistry*, 10(4).

Testa, R. J., Habarth, J., Peta, J., Balsam, K., & Bockting, W. (2015). Development of the gender minority stress and resilience measure. *Psychology of Sexual Orientation and Gender Diversity*, 2 (1), 65–77. https://doi.org/10.1037/sgd0000081.

Zubair, U. (2021). The prevalence and correlates of depression among the trans-genders of Pakistan. *European Psychiatry*, 64(S1), S597–S598. https://doi.org/10.1192/j.eurpsy.2021.1594.