

Psychological Distress, Coping Strategies, and Perceived Social Support Among Caregivers of Palliative-Care Patients in Tribal Communities

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Abstract

Family caregivers sustain much of the day-to-day work of palliative care, yet their psychological needs may remain insufficiently visible in settings where specialist services, respite, and transport are constrained. This study examined psychological distress, coping strategies, and perceived social support among caregivers of palliative-care patients in a study identified as involving tribal communities.

A quantitative cross-sectional analysis was conducted on 60 caregiver records. Depression, anxiety, and stress were represented by the 21-item Depression Anxiety Stress Scales (DASS-21); coping by the 14 two-item Brief COPE dimensions; and perceived social support by the Multidimensional Scale of Perceived Social Support (MSPSS). Descriptive statistics, internal-consistency estimates, Pearson and Spearman correlations, group comparisons, and parsimonious multiple regressions were used.

Mean doubled DASS-21 scores were 25.37 for depression, 24.77 for anxiety, and 26.90 for stress. Perceived social support correlated inversely with depression ($r = -.522$), anxiety ($r = -.484$), and stress ($r = -.474$), all $p < .001$. Denial, behavioural disengagement, venting, and self-blame were positively associated with distress, whereas active coping, positive reframing, acceptance, and religious coping generally showed inverse associations. Models containing perceived support, denial, active coping, and self-blame explained 60.2% of depression variance, 57.1% of anxiety variance, and 61.9% of stress variance. Most demographic and caregiving group comparisons were nonsignificant.

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Caregiver distress in this sample was more consistently related to perceived psychosocial resources and coping patterns than to broad demographic categories. Family-centred palliative care should include caregiver psychological assessment, context-sensitive support mobilisation, and coping-focused interventions. Findings are correlational and require replication in larger, longitudinal, culturally documented samples.

Keywords: Palliative Care | Family Caregivers | Psychological Distress | Coping | Social Support | Tribal Communities

I. INTRODUCTION

Palliative care is explicitly concerned with the quality of life of people living with serious illness and with the well-being of their families. In practice, however, the family component of this definition can be difficult to operationalise. When care shifts from hospital to home, relatives often become the continuity mechanism between clinical encounters: they administer or supervise medicines, observe symptoms, assist with mobility and nutrition, coordinate transport, communicate with clinicians, and remain emotionally available during uncertainty. The role can be meaningful and relationally important, but it can also entail prolonged vigilance, disrupted sleep, financial pressure, role conflict, anticipatory grief, and repeated exposure to suffering. These demands make caregiver mental health a substantive component of palliative-care quality rather than a peripheral concern (World Health Organization, 2020).

India presents a particularly important context for family caregiving. A systematic review and meta-analysis estimated a substantial population need for palliative care and reported higher pooled need in rural than urban settings (Chandra et al., 2023). National policy has increasingly emphasised integration of palliative care into public-health and community systems, recognising that specialist facilities alone cannot provide continuity for all families (Ministry of Health and Family Welfare, Government of India,

2017, 2023). Home-based models can reduce travel and bring care closer to households, but they also place considerable practical responsibility on relatives. Reviews of home-based palliative care in India therefore emphasise continuity, multidisciplinary coordination, caregiver education, and accessible clinical advice (Kirtania & Katta, 2023).

The relevance of these issues may be amplified in tribal and geographically marginalised communities, although the term tribal encompasses highly heterogeneous peoples, languages, histories, and social conditions. It is inappropriate to treat such communities as culturally uniform or intrinsically vulnerable. Rather, research must attend to structural circumstances that can influence access: distance, transport cost, language, service availability, livelihood constraints, trust, and the cultural safety of clinical communication. Recent qualitative work with Paniya communities in Wayanad documented interacting barriers involving awareness, affordability, geography, communication, and culturally responsive service provision (Keerthana & Kubendran, 2025). That study cannot be used to infer the identity or experience of the present sample, whose exact field site and tribal-group metadata were not available in the research file used for this manuscript, but it demonstrates why caregiver psychology should be interpreted within service and community context.

Psychological distress is not a unitary response. Depression, anxiety, and stress overlap, yet they capture distinguishable features of negative emotional experience. Depression includes low positive affect, hopelessness, and loss of motivation; anxiety captures apprehension and physiological arousal; and stress reflects tension, irritability, and difficulty relaxing. The DASS framework was developed to distinguish these dimensions while recognising their intercorrelation (Lovibond & Lovibond, 1995). In palliative caregiving, this distinction is useful. A relative may experience intense anxiety about sudden deterioration without equivalent hopelessness, or chronic tension and exhaustion without the same degree of depressive affect. DASS-21 severity bands are therefore best understood as symptom descriptors, not diagnostic categories. A questionnaire cannot establish a psychiatric disorder without broader clinical assessment.

Existing evidence indicates that caregiver distress deserves systematic attention. Götze et al. (2014) reported substantial anxiety and depressive symptoms among relatives caring for palliative cancer patients at home. Nipp et al. (2016) similarly identified clinically relevant psychological symptoms among family caregivers of patients with incurable cancer and showed that coping processes were associated with emotional outcomes. In India, Kochuvilayil and Varma (2022) found important correlates of depression screening among women caregivers in primary palliative care, while later mixed-method work highlighted the interaction of caregiver burden, quality of life, and service needs (Kochuvilayil & Varma, 2024). Systematic reviews further show that psychological and psychosocial interventions for palliative caregivers vary in content and effect, indicating that generic support may be less useful than interventions matched to specific mechanisms and needs (Hudson et al., 2010; Nowels et al., 2023; Yan et al., 2024; Yıldız et al., 2024).

Two mechanisms are especially relevant: coping and perceived social support. Transactional stress

theory proposes that psychological responses depend partly on how demands are appraised and on whether people believe they have adequate resources to manage them (Lazarus & Folkman, 1984). Coping comprises cognitive and behavioural efforts to manage those demands. The Brief COPE deliberately represents coping as multidimensional rather than as a single adaptive-maladaptive continuum (Carver, 1997). Active coping, planning, acceptance, positive reframing, support seeking, religion, humour, denial, disengagement, self-distraction, venting, substance use, and self-blame may serve different functions depending on controllability, timing, and context. This is particularly important in palliative care, where some practical problems are modifiable but the underlying illness trajectory may not be.

Perceived social support provides a complementary relational resource. Cohen and Wills (1985) distinguished broad beneficial effects of social integration from a stress-buffering process in which support becomes particularly consequential under high demand. The MSPSS assesses perceived availability of support from family, friends, and a significant other (Zimet et al., 1988, 1990). Perceived support differs from simply counting helpers: two caregivers may receive similar amounts of practical assistance yet differ markedly in whether they feel understood, valued, and able to seek help. A recent meta-analysis likewise underscores the distinction between perceived and received support in family caregiving (Gutiérrez-Sánchez et al., 2024).

Theoretical integration suggests that caregiving demands acquire psychological meaning through appraisal, while coping and support influence the resources available for responding. Pearlin et al.'s (1990) Stress Process Model adds that caregiver outcomes emerge from the interaction of primary stressors, secondary strains, background conditions, and mediating resources. Although developed in another caregiving domain, this logic is relevant to palliative care: illness severity and care demands matter, but they do not determine emotional outcomes in isolation. A caregiver with

reliable relational support and flexible coping may experience the same objective task differently from someone who feels alone, guilty, or unable to act.

Three gaps motivate the present analysis. First, evidence on palliative caregivers in tribal-community contexts remains limited compared with hospital-based oncology and urban samples. Second, studies frequently examine burden, distress, coping, or support separately, obscuring their joint pattern. Third, measurement can lose conceptual specificity when coping strategies are collapsed into a global score or when distress dimensions are combined without justification. The present study therefore retained depression, anxiety, and stress as separate outcomes; examined all 14 Brief COPE strategies; and treated perceived social support as a multidimensional psychosocial resource.

The study addressed five questions: What levels of depression, anxiety, and stress were present? Which coping strategies were reported? What was the level of perceived social support? How were support and coping related to distress? Did distress differ across selected demographic and caregiving characteristics? Five corresponding hypotheses were evaluated: perceived social support would be negatively associated with depression (H1), anxiety (H2), and stress (H3); specific coping strategies would be associated with distress (H4); and distress would differ across selected demographic and caregiving characteristics (H5). Because the analysis is cross-sectional, the hypotheses concern association rather than causal direction.

II. CONCEPTUAL AND EMPIRICAL CONTEXT

Family caregiving in palliative care sits at the intersection of clinical work, household relationships, and social structure. The caregiver is neither simply a co-patient nor merely an unpaid extension of the health-care team. Caregivers interpret symptoms, make practical decisions, negotiate with relatives, preserve household

routines, and often absorb uncertainty that cannot be resolved by medical information alone. This position helps explain why psychological distress is shaped by more than the number of tasks performed. The same care activity can be experienced as manageable, meaningful, frightening, or overwhelming depending on appraisal, prior experience, available support, financial flexibility, and confidence in obtaining professional help.

The Stress Process Model provides a useful multilevel frame for this complexity. Pearlin et al. (1990) distinguished primary stressors linked directly to caregiving from secondary strains that spread into other domains of life, while also recognising the importance of background conditions and mediating resources. Applied to palliative care, primary stressors may include symptom monitoring, physical assistance, night-time vigilance, or difficult communication. Secondary strains can include work disruption, financial pressure, reduced social participation, family conflict, or loss of personal time. Coping and social support can function as resources within this process, but their usefulness is likely to depend on the nature of the stressor and on whether the caregiver experiences the resource as accessible and adequate.

Transactional theory adds a process-level explanation. Lazarus and Folkman (1984) argued that stress cannot be understood solely from the external event; it depends on appraisal. Primary appraisal concerns what an event means for well-being, while secondary appraisal concerns perceived options and resources. Palliative caregiving repeatedly requires both. A change in symptoms may be appraised as a manageable fluctuation when the caregiver has clear instructions and rapid access to clinical advice, but as a crisis when transport is uncertain or the caregiver feels solely responsible. In this sense, health-system accessibility can enter the psychological process indirectly by altering perceived control and uncertainty.

This framework also clarifies why coping strategies cannot be ranked independently of context. Problem-focused action is useful when a problem is modifiable, but relentless attempts to control an irreversible illness can generate frustration. Acceptance can be adaptive when it permits engagement with reality, yet passive resignation may look superficially similar on a questionnaire. Support seeking can reduce uncertainty when trusted help is available, but repeated unsuccessful attempts to obtain assistance may intensify helplessness. A two-item coping scale cannot capture all of these functional distinctions. Strategy scores should therefore be treated as indicators of reported response tendencies, not as definitive labels of psychological competence.

Caregiver research has often used the language of burden, but burden and distress are not interchangeable. Burden concerns perceived strain associated with the responsibilities and consequences of care. Psychological distress refers to emotional symptoms. A caregiver can experience high workload while retaining emotional stability, or report severe anxiety despite a relatively modest number of practical tasks. The distinction matters for intervention. Respite and task-sharing may be appropriate responses to workload, whereas persistent self-blame or panic may require psychological intervention even when practical help is available. The present dataset did not contain a validated caregiver-burden scale, so the analysis deliberately avoids using DASS scores as a substitute for burden.

The Indian palliative-care context further complicates the relationship between demand and distress. Community-oriented models have demonstrated that palliative care can be delivered beyond tertiary hospitals, but access remains uneven. Chandra et al. (2023) reported higher pooled palliative-care need in rural settings, and national guidance has sought to integrate palliative care with broader public-health services. The practical success of such integration depends not only on whether a service exists but on whether families can reach it, communicate with

providers, afford indirect costs, and obtain continuity when symptoms change. Caregiver distress may therefore reflect the interaction of illness-related uncertainty with service-navigation demands.

Evidence from tribal-community research is especially important because standard health-service assumptions may not travel easily across contexts. Keerthana and Kubendran (2025) identified multiple barriers among Paniya communities rather than a single knowledge deficit. Their findings point to the need to consider transport, affordability, communication, service availability, and cultural responsiveness together. A psychologically informed service model should consequently avoid interpreting delayed help-seeking as individual failure when structural barriers shape available choices. At the same time, tribal communities should not be represented only through barriers. Family networks, collective practices, local knowledge, and spirituality may provide substantial resources that conventional service metrics overlook.

Social support theory offers a way to examine some of these resources without assuming that network size equals support. Cohen and Wills (1985) proposed both main-effect and buffering pathways. The main-effect account suggests that social integration is broadly beneficial, while buffering implies that support becomes particularly protective when stress is high. The present sample cannot test buffering formally because caregiving-demand measures and sample size are insufficient for a well-powered interaction model. It can, however, test the more fundamental proposition that caregivers who perceive stronger support report less distress. The consistency of that relationship across depression, anxiety, and stress would strengthen the case for future moderation research.

Perceived support also has measurement advantages in caregiving contexts. Practical help can be objectively present yet experienced as unreliable, critical, or insufficient. Conversely, a caregiver may receive relatively little task

assistance but feel emotionally secure because a trusted person is available for advice or reassurance. The MSPSS distinguishes family, friends, and a significant other, allowing source-specific patterns to emerge (Zimet et al., 1988). Psychometric work has supported its internal reliability across populations (Osman et al., 2014), but cultural meaning remains important. A 'significant other' may be interpreted differently across relationship structures, and friend support may be constrained by caregiving-related social withdrawal.

The distinction between perceived and received support has empirical support beyond the MSPSS literature. Gutiérrez-Sánchez et al. (2024) synthesised family-caregiver research and showed that perceived and received support are related but not identical constructs. This distinction has direct service implications. Programmes that count home visits or helpers may overestimate support if caregivers do not experience those contacts as responsive. Conversely, a small number of trusted relationships may provide strong psychological protection. Evaluating caregiver services therefore requires both objective indicators of assistance and subjective indicators of adequacy, trust, and emotional availability.

Coping research in palliative care likewise suggests that strategy-level analysis is more informative than global classification. Perez-Ordóñez et al. (2016) linked coping with anxiety among caregivers of palliative cancer patients, while Nipp et al. (2016) showed associations between coping and psychological symptoms among caregivers of patients with incurable cancer. These studies support the idea that emotional outcomes are partly patterned by how caregivers respond to demands. Yet associations do not reveal direction. A caregiver may become distressed because avoidance interferes with problem management, or may avoid because distress has already depleted cognitive and emotional capacity. Longitudinal designs are required to distinguish these pathways.

Intervention evidence reinforces this need for mechanism clarity. Hudson et al. (2010) documented considerable heterogeneity in psychosocial interventions for palliative family carers. More recent syntheses have similarly found that palliative and caregiver interventions do not produce uniform psychological effects (Nowels et al., 2023; Yan et al., 2024; Yıldız et al., 2024). Programmes vary in timing, intensity, delivery mode, theoretical basis, and outcome selection. An intervention that improves preparedness may not reduce grief, while a supportive counselling intervention may reduce anxiety without changing practical workload. Identifying specific correlates such as perceived isolation, denial, or self-blame can help formulate more testable intervention mechanisms.

Gender and socioeconomic context also warrant attention without deterministic assumptions. Meta-analytic evidence has reported gender differences in caregiver stressors and resources in some populations (Pinquart & Sörensen, 2006), and Indian palliative-care research has highlighted the experiences of women caregivers (Kochuvilayil & Varma, 2022). However, gender effects can reflect differences in task allocation, employment, social expectations, or support rather than gender itself. Similarly, income categories may fail to capture financial toxicity, debt, transport cost, or lost wages. Nonsignificant demographic comparisons in a small sample should therefore be interpreted as absence of robust evidence in that sample, not evidence that structural conditions are irrelevant.

Psychological measurement introduces another layer of complexity. DASS-21 separates depression, anxiety, and stress but the dimensions are correlated and may share a broad negative-affect component (Lovibond & Lovibond, 1995; Osman et al., 2012). High internal consistency is desirable, yet extremely high coefficients can reflect item redundancy or strong common variance. Reporting each subscale preserves the intended construct distinction and prevents a global distress total from obscuring potentially different patterns. The same principle applies to

Brief COPE: its 14 dimensions should not be summed simply because they share a response format.

Severity categories also need context. In palliative caregiving, symptoms can be intense without mapping neatly onto psychiatric diagnoses. Anticipatory grief, sleep disruption, fear of deterioration, and exhaustion can elevate distress scores. The appropriate clinical response is neither to dismiss high scores as normal nor to diagnose from a screening measure. Instead, symptom severity can guide further enquiry into duration, impairment, risk, grief, trauma, and physical health. This distinction is especially important in community research where specialist diagnostic assessment may not be part of the protocol.

The literature therefore points toward an integrated but restrained analytic strategy. Distress should be described dimensionally; coping should be retained at strategy level; support should be examined as a perceived relational resource; and demographic variables should provide context rather than serve as assumed causes. Associations can identify candidate mechanisms, but causal claims require temporal ordering and intervention evidence. This approach guided the present study and provides the basis for interpreting its results without overstating what a cross-sectional sample of 60 caregivers can establish.

III. METHODOLOGY

Study design and participants. The study used a quantitative cross-sectional observational design. The analytical file contained 60 caregiver records. The research title identifies the population as caregivers of palliative-care patients in tribal communities. The reliable materials available for manuscript preparation did not establish the exact district, tribal group, recruitment site, sampling frame, or formal ethics-committee approval number. Those particulars are therefore not inferred from unrelated literature. This limitation affects external and culture-specific interpretation but does not alter the descriptive and correlational calculations performed on the available records.

Participant information indicated voluntary participation, confidentiality, the absence of personal identifiers, and the right to discontinue. The sample had a mean age of 43.85 years ($SD = 11.95$; range = 20–64). Women represented 61.7% of participants, men 36.7%, and one participant was recorded in another gender category. Most participants were married (73.3%). Spouses formed the largest relationship group (40.0%), followed by children (25.0%) and parents (20.0%). Educational attainment was concentrated at primary education or no schooling. Homemakers (38.3%) and daily-wage workers (30.0%) constituted the largest employment categories. Caregiving duration was relatively evenly distributed across less than six months, six to twelve months, and more than twelve months. Most caregivers (86.7%) reported receiving some help with caregiving.

Measures. Psychological distress was operationalised using the item structure of the 21-item Depression Anxiety Stress Scales. Seven items contributed to each subscale: depression (items 3, 5, 10, 13, 16, 17, and 21), anxiety (2, 4, 7, 9, 15, 19, and 20), and stress (1, 6, 8, 11, 12, 14, and 18). Item responses were in the expected 0–3 range. Subscale sums were multiplied by two for comparison with conventional severity bands (Lovibond & Lovibond, 1995). Scores were interpreted dimensionally; severity labels were not treated as psychiatric diagnoses. Internal consistency was estimated separately for the three subscales.

Coping was represented by the 28-item Brief COPE (Carver, 1997). Fourteen two-item dimensions were calculated: self-distraction, active coping, denial, substance use, emotional support, instrumental support, behavioural disengagement, venting, positive reframing, planning, humour, acceptance, religion, and self-blame. Each dimension was expressed as the mean of its two items on the 1–4 response metric. No overall coping score was created because the measure intentionally samples qualitatively different strategies and because a higher-order structure was not independently validated in this

sample. Internal-consistency coefficients for two-item scales were interpreted cautiously because alpha is strongly affected by scale length.

Perceived social support was operationalised with the 12-item MSPSS (Zimet et al., 1988). Four items assess family support, four friend support, and four support from a significant other; an overall mean across all 12 items was also calculated. Responses in the dataset followed the 1–7 scale structure. The MSPSS captures perceived availability and adequacy of support rather than objective network size or hours of practical help. Prior work supports the scale's reliability and multidimensional interpretation (Osman et al., 2014; Zimet et al., 1990).

Data quality and statistical analysis. All 60 records were retained. No duplicate participant identifiers or missing scale responses were identified, and all DASS-21, Brief COPE, and MSPSS item values were within the expected ranges represented by their structures. Descriptive analysis used frequencies and percentages for categorical variables and means, standard deviations, minima, and maxima for continuous scores. Cronbach's alpha was used to describe internal consistency. DASS-21 symptom-severity categories were reported descriptively using conventional doubled-score bands.

The primary support hypotheses were tested with Pearson correlations between MSPSS total and each DASS dimension. Spearman rank correlations were also examined as a robustness check because stress showed some departure from normality and because rank-based estimates are less sensitive to distributional assumptions. H4 was evaluated using Spearman correlations between each Brief COPE dimension and depression, anxiety, and stress. These numerous strategy-level tests were interpreted as a pattern rather than as isolated discoveries, with attention to consistency of direction and magnitude. H5 was explored through appropriate group comparisons across education, marital status, relationship to patient, caregiving duration, employment, income, gender, and caregiving help. Small and

imbalanced categories limited the strength of subgroup inference.

To examine whether selected psychosocial variables contributed complementary information, three parsimonious multiple regressions were estimated with depression, anxiety, and stress as separate outcomes. Predictors were MSPSS total support, denial, active coping, and self-blame. This set was restricted in advance of the final models to avoid fitting a large number of coping variables to only 60 observations. Standardised coefficients were reported. Variance-inflation factors ranged from 1.15 to 2.09, providing no indication of problematic multicollinearity among the selected predictors. Regression results are treated as statistical prediction within a cross-sectional dataset, not as evidence that changing a predictor would necessarily cause a change in distress.

Research-integrity boundary. The research materials contain an unresolved instrument-documentation discrepancy: the spreadsheet has item structures corresponding to DASS-21, Brief COPE, and MSPSS, whereas a separate short questionnaire does not reproduce those item counts and response formats. The present manuscript reports analyses of the scale structures represented in the dataset and does not claim that the short form generated those responses. Before journal submission, the authors should reconcile the administered instrument, translation/adaptation procedures, recruitment details, and ethics documentation with original field records. This is a provenance requirement rather than a statistical issue.

IV. RESULTS

Participant and measurement profile. The demographic pattern indicates a predominantly family-based caregiving sample with substantial representation of women and participants with limited formal education. The concentration of homemakers and daily-wage workers also suggests that caregiving occurred alongside potentially constrained household resources. These characteristics provide context for the

psychological findings but should not be treated as causal explanations. Table 1 summarises the principal sample characteristics.

Table 1. *Selected Characteristics of the Study Sample (N = 60)*

Characteristic	Category	n	%
Gender	Female	37	61.7
Gender	Male	22	36.7
Education	No schooling	16	26.7
Education	Primary	20	33.3
Relationship	Spouse	24	40.0
Caregiving duration	<6 months	19	31.7
Caregiving duration	6–12 months	23	38.3
Caregiving duration	>12 months	18	30.0
Employment	Homemaker	23	38.3
Employment	Daily wage	18	30.0
Help in caregiving	Yes	52	86.7

Note. Percentages are based on N = 60; selected categories are shown for manuscript economy.

Internal consistency was high for all three DASS dimensions: alpha was .942 for depression, .937 for anxiety, and .939 for stress. MSPSS reliability was also high, with alpha values of .890 for family, .911 for friends, .908 for significant-other support, and .966 for the total score. The magnitude of these coefficients indicates strong covariance among items within the intended dimensions. Reliability does not establish construct validity, however, and the very high coefficients should be interpreted alongside the conceptual overlap among negative emotional states.

Psychological distress. Mean doubled DASS-21 scores were 25.37 (SD = 9.11) for depression, 24.77 (SD = 8.63) for anxiety, and 26.90 (SD = 9.03) for stress. The severity distribution was striking. For depression, 48.3% of participants fell in the extremely severe band and a further 21.7% in the severe band. For anxiety, 75.0% were in the extremely severe band. Stress showed a different profile: 46.7% were severe and 23.3% extremely

severe. Figure 1 presents the distribution. These categories describe symptom intensity relative to conventional DASS thresholds and should not be read as prevalence estimates of depressive or anxiety disorders.

Table 2. *Psychological Distress and Perceived Social Support Descriptives*

Measure	M	SD	Cronbach's α
DASS depression	25.37	9.11	.942
DASS anxiety	24.77	8.63	.937
DASS stress	26.90	9.03	.939
MSPSS family	4.07	0.84	.890
MSPSS friends	3.58	0.84	.911
MSPSS significant other	3.58	0.87	.908
MSPSS total	3.75	0.83	.966

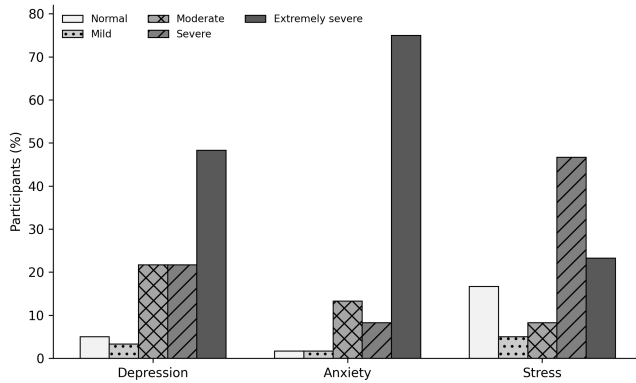
Note. DASS-21 values are doubled subscale scores; MSPSS values are means on the 1–7 response scale.

Table 3. *DASS-21 Symptom-Severity Distribution*

Severity	Depression n (%)	Anxiety n (%)	Stress n (%)
Normal	3 (5.0)	1 (1.7)	10 (16.7)
Mild	2 (3.3)	1 (1.7)	3 (5.0)
Moderate	13 (21.7)	8 (13.3)	5 (8.3)
Severe	13 (21.7)	5 (8.3)	28 (46.7)
Extremely severe	29 (48.3)	45 (75.0)	14 (23.3)

Note. Severity bands describe symptom intensity and are not psychiatric diagnoses.

Figure 1. *Distribution of DASS-21 Symptom-Severity Categories*



Note. Percentages are based on conventional doubled DASS-21 subscale scores.

Perceived social support. Overall MSPSS averaged 3.75 (SD = 0.83) on the 1–7 scale. Family support was the highest dimension (M = 4.07, SD = 0.84), whereas friends (M = 3.58, SD = 0.84) and significant-other support (M = 3.58, SD = 0.87) were lower. The pattern suggests that family was the strongest perceived source in this sample, but the absolute means indicate room for strengthening relational resources.

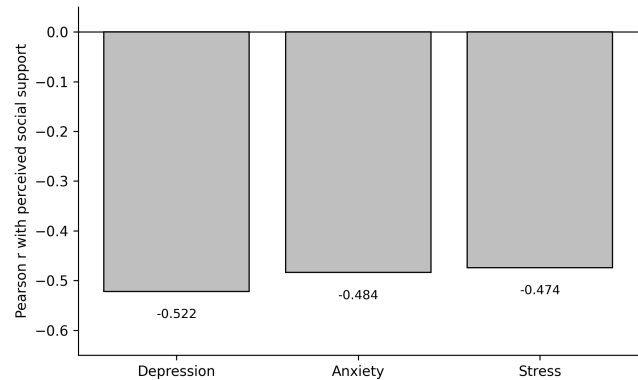
Support-distress associations. Perceived social support showed consistent moderate inverse relationships with all three distress outcomes. MSPSS total correlated with depression at $r = -.522$ ($p < .001$), anxiety at $r = -.484$ ($p < .001$), and stress at $r = -.474$ ($p < .001$). Spearman coefficients were similar or slightly stronger: $\rho = -.539$, $-.514$, and $-.501$, respectively, all $p < .001$. Convergence across Pearson and rank-based estimates strengthens confidence that the result is not an artefact of a single distributional assumption. H1, H2, and H3 were therefore supported. Figure 2 visualises the Pearson coefficients.

Table 4. Association of Perceived Social Support With Psychological Distress

Outcome	Pearson r	p	Spearman ρ	p
Depression	-.522	< .001	-.539	< .001
Anxiety	-.484	< .001	-.514	< .001
Stress	-.474	< .001	-.501	< .001

Note. MSPSS total was the social-support variable.

Figure 2. Perceived Social Support Correlations With Psychological Distress



Note. Bars show Pearson correlations between MSPSS total and each DASS-21 dimension.

Coping patterns. Brief COPE means were tightly clustered around the middle of the 1–4 scale, so the more informative results concerned associations with distress. Self-distraction correlated positively with depression ($\rho = .559$), anxiety (.569), and stress (.595). Denial showed similarly strong positive associations (.591, .616, and .618), as did behavioural disengagement (.568, .591, and .571) and venting (.615, .586, and .612). Self-blame was also positively associated with depression (.491), anxiety (.499), and stress (.520). Substance use showed smaller positive correlations (.376, .369, and .432).

Table 5. Selected Brief COPE Correlations With Psychological Distress

Strategy	Depression ρ	Anxiety ρ	Stress ρ
Self-distraction	.559	.569	.595
Active coping	-.343	-.321	-.391
Denial	.591	.616	.618
Substance use	.376	.369	.432
Behavioural disengagement	.568	.591	.571
Venting	.615	.586	.612
Positive reframing	-.401	-.371	-.356
Humour	.576	.597	.617
Acceptance	-.356	-.305	-.316
Religion	-.399	-.362	-.370

Self-blame	.491	.499	.520
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Note. Spearman coefficients are shown. Strategy interpretation should consider context and multiple testing.

Several strategies showed inverse relationships. Active coping correlated with depression at $\rho = -.343$, anxiety at $-.321$, and stress at $-.391$. Positive reframing showed coefficients of $-.401$, $-.371$, and $-.356$; acceptance $-.356$, $-.305$, and $-.316$; and religion $-.399$, $-.362$, and $-.370$. Emotional and instrumental support-seeking showed modest inverse correlations with depression but weaker and nonsignificant associations with anxiety and stress. Planning followed a similar pattern. Humour was positively associated with all three outcomes (.576, .597, and .617), a result that cautions against imposing a universal adaptive-maladaptive classification on coping labels. H4 was supported at the level of a coherent strategy-specific pattern rather than a global coping score. Group comparisons. Broad demographic and caregiving categories did not provide a robust explanation of distress. Caregiving duration was not significantly associated with depression ($p = .411$), anxiety ($p = .661$), or stress ($p = .512$). Education, marital status, relationship to patient, employment, income, and the binary indicator of caregiving help likewise produced no consistent significant pattern. A parametric female-male stress comparison reached a conventional threshold in one analysis, but the corresponding non-parametric result was not significant, making the finding insufficiently robust for substantive interpretation. H5 was therefore not supported.

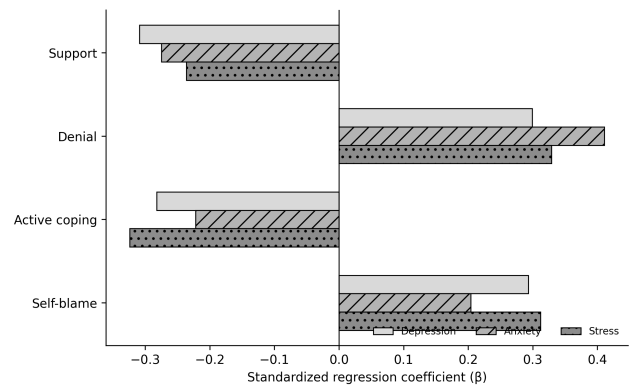
Table 6

Parsimonious Regression Models for Depression, Anxiety, and Stress

Predictor	Depression β (p)	Anxiety β (p)	Stress β (p)
Perceived social support	-.309 (.002)	-.275 (.007)	-.236 (.013)
Denial	.299 (.018)	.411 (.002)	.329 (.008)
Active coping	-.282 (.003)	-.222 (.022)	-.324 (< .001)
Self-blame	.293 (.018)	.204 (.108)	.312 (.011)

Note. Model R^2 values were .602 for depression, .571 for anxiety, and .619 for stress. Coefficients are standardized.

Figure 3. Standardized Regression Coefficients Across Psychological Distress Outcomes



Note. Coefficients are from separate models for depression, anxiety, and stress; self-blame was not significant in the anxiety model.

Multivariable models. The depression model explained 60.2% of variance (adjusted $R^2 = .573$). Higher perceived support independently predicted lower depression ($\beta = -.309$, $p = .002$), denial predicted higher depression ($\beta = .299$, $p = .018$), active coping predicted lower depression ($\beta = -.282$, $p = .003$), and self-blame predicted higher depression ($\beta = .293$, $p = .018$). The anxiety model explained 57.1% of variance (adjusted $R^2 = .540$). Support ($\beta = -.275$, $p = .007$), denial ($\beta = .411$, $p = .002$), and active coping ($\beta = -.222$, $p = .022$) were significant; self-blame was not significant after adjustment ($\beta = .204$, $p = .108$). The stress model explained 61.9% of variance (adjusted $R^2 = .592$), with significant contributions from support ($\beta = -.236$, $p = .013$), denial ($\beta = .329$, $p = .008$), active coping ($\beta = -.324$, $p < .001$), and self-blame ($\beta = .312$, $p = .011$). Figure 3 shows the standardised coefficients.

Taken together, the results identify a consistent psychosocial pattern. Distress was high, but broad demographic categories did not discriminate strongly among participants. Perceived support was inversely related to every distress outcome, and coping strategies were differentiated in theoretically meaningful ways. The regression models further suggest that relational resources

and coping patterns carried complementary statistical information. Because the same time point generated predictors and outcomes, the models do not establish temporal order and may overestimate explanatory performance in a small sample.

V. DISCUSSION

This study examined psychological distress, coping, and perceived social support among 60 caregivers of palliative-care patients in a study identified as involving tribal communities. Four findings deserve particular attention. First, depression, anxiety, and stress symptom levels were high, especially anxiety. Second, perceived social support was consistently associated with lower distress. Third, coping strategies were not interchangeable: denial, disengagement, venting, self-distraction, and self-blame tended to accompany greater distress, whereas active coping, positive reframing, acceptance, and religious coping tended to accompany lower distress. Fourth, broad demographic and caregiving categories did not explain the pattern as consistently as psychosocial variables did. These findings support an appraisal-and-resource interpretation of caregiver distress while requiring caution about causal direction and cultural generalisation.

The high DASS symptom levels are compatible with the broader palliative-care literature showing that family members can experience substantial emotional strain. Götze et al. (2014) documented anxiety and depression among caring relatives during home palliative care, and Nipp et al. (2016) showed that psychological symptoms among caregivers of patients with incurable cancer were associated with coping. Existential distress is also increasingly recognised among family caregivers of patients with advanced cancer (Walbaum et al., 2024). The present study extends that concern by separating depression, anxiety, and stress and by showing particularly pronounced anxiety severity. Palliative caregiving naturally contains uncertainty: symptom crises can occur unpredictably, caregivers may fear missing signs of deterioration, and practical decisions are made

under emotional pressure. High anxiety may therefore reflect a combination of anticipatory threat, responsibility, and limited perceived control.

The severity distribution nevertheless requires disciplined interpretation. DASS-21 bands are not diagnostic thresholds. Palliative caregiving can involve grief, fatigue, sleep loss, and intense situational worry that overlap phenomenologically with psychiatric symptoms. A high score should trigger attention and, when appropriate, further assessment; it should not automatically generate a disorder label. This distinction is important both ethically and clinically. Pathologising understandable reactions can undermine trust, while normalising all distress as an inevitable part of caregiving can leave severe and treatable problems unaddressed. A stepped assessment approach is preferable: brief symptom screening followed by contextual clinical enquiry into duration, impairment, safety, grief, trauma exposure, physical health, and available support.

Perceived social support emerged as the most stable correlate across outcomes. The inverse correlations with depression, anxiety, and stress were moderate and replicated with Pearson and Spearman methods. This pattern is consistent with the stress-buffering framework of Cohen and Wills (1985) and with later evidence distinguishing perceived from received support (Gutiérrez-Sánchez et al., 2024). Support can influence caregiver experience through several pathways. Emotional validation can reduce isolation; informational support can reduce uncertainty; practical assistance can create opportunities for rest; and trusted relationships can alter secondary appraisal by making demands feel more manageable. Importantly, the binary variable indicating whether someone helped with caregiving was not significantly related to distress, whereas MSPSS was. The psychological adequacy of support may therefore carry information that a simple count of helpers misses.

Family was the strongest perceived support source, which is plausible in a family-centred

caregiving context. Yet this result should not be romanticised. Family systems can distribute care and provide belonging, but they can also generate unequal responsibility, conflict, criticism, or expectations that discourage disclosure of exhaustion. The MSPSS captures perceived availability, not the complexity of family dynamics. Future work should distinguish emotional support, instrumental help, decision support, respite, and relationship quality. Qualitative enquiry could be especially useful in tribal-community settings, where kinship, collective responsibility, spirituality, and local concepts of care may not map neatly onto standardised categories.

The coping findings reinforce the value of retaining Brief COPE subscales rather than producing a global coping score. Denial showed one of the strongest positive relationships with distress and remained significant in every regression model. In the short term, partial denial can protect a person from overwhelming information, but sustained denial may interfere with preparation, communication, and help-seeking. The cross-sectional design prevents deciding whether denial intensifies distress or whether highly distressed caregivers rely more heavily on denial. The clinically relevant point is that denial and distress co-occurred strongly enough to warrant exploration in future longitudinal work and in supportive conversations. Behavioural disengagement and self-blame also accompanied greater distress. Disengagement can represent depletion or perceived helplessness rather than indifference. In palliative contexts, caregivers may reach a point at which demands feel unmanageable and efforts appear ineffective. Self-blame is especially important because serious illness generates many outcomes that are outside caregiver control. Relatives may retrospectively question treatment decisions, symptom recognition, finances, or interpersonal exchanges. Counselling can help differentiate responsibility from influence and can address unrealistic guilt without dismissing genuine relational complexity. In the multivariable models, self-blame retained an independent association with depression and stress but not anxiety, suggesting that its

emotional relevance may be more closely connected to negative self-evaluation and sustained tension than to apprehensive arousal. Active coping was inversely associated with all three outcomes and remained significant after adjustment. This result is consistent with transactional stress theory, but it should not be interpreted as an instruction to solve the unsolvable. Palliative care contains both controllable and uncontrollable demands. Active coping may be useful for organising medicines, asking questions, arranging transport, sharing tasks, or seeking clinical advice. It is less appropriate when framed as a demand to control disease progression. Effective caregiver interventions should therefore teach discrimination between what can be acted on and what requires acceptance, emotional processing, or meaning-making.

Positive reframing and acceptance were also associated with lower distress. Acceptance in palliative care is not resignation. It can mean acknowledging the reality of illness sufficiently to make decisions, preserve relationships, and direct energy toward achievable goals. Positive reframing can involve identifying meaning, connection, or competence without denying loss. These processes are compatible with acceptance-based and meaning-oriented psychological approaches, but the current correlations cannot establish that increasing either strategy will reduce symptoms. Intervention studies are needed to test whether changes in coping precede changes in distress.

Religious coping showed inverse associations with depression, anxiety, and stress. Spirituality may provide meaning, ritual, community, hope, and a framework for tolerating uncertainty. In culturally diverse settings, however, spiritual resources must be approached from the caregiver's own worldview. The finding does not justify assuming religiosity, prescribing religious practice, or treating spirituality as uniformly protective. Religious coping can take positive and negative forms that were not distinguished here. Future culturally grounded research should examine how

local spiritual beliefs intersect with caregiving responsibility, suffering, and help-seeking.

Humour provides a useful warning against simplistic labels. It was positively associated with distress in this sample despite often being considered adaptive. Humour may be used defensively, may increase when distress is high, or may have culture-specific meanings not captured by two items. Similarly, venting can be helpful when it facilitates emotional expression in a responsive relationship but less helpful when it becomes repetitive arousal without problem resolution. Self-distraction can provide necessary respite yet become avoidant when it repeatedly displaces required decisions. The function of a strategy depends on context, dose, timing, and flexibility. Coping assessment should therefore ask what a person is doing, why, and with what consequences rather than merely scoring strategies as good or bad.

The lack of robust demographic differences is also informative. Caregiving duration, education, marital status, relationship to the patient, employment, income, and a binary help variable did not consistently differentiate DASS outcomes. This does not mean demographic or structural conditions are irrelevant. With only 60 participants and several small categories, power to detect subgroup differences was limited. Broad categories may also be poor proxies for the actual stressors that matter. Two caregivers with the same duration may differ greatly in patient dependence, night-time care, symptom complexity, financial loss, family conflict, or access to respite. Future studies should measure caregiving intensity and unmet need directly rather than relying primarily on demographic groupings.

The regression models provide an integrated view. Support remained inversely associated with all three outcomes after denial, active coping, and self-blame were included. Denial remained positively associated with every outcome, and active coping remained inversely associated. These complementary coefficients are consistent

with the idea that caregiver distress reflects both relational resources and individual responses to demand. Yet the R^2 values, ranging from .57 to .62, should not be interpreted as stable population estimates. In a sample of 60, model performance can be optimistic. Cross-validation and replication in larger samples are needed before using these variables for risk prediction.

The findings have practical implications for palliative-care services. First, caregiver psychological health should be made visible. Brief, repeated check-ins can ask about sleep, persistent worry, hopelessness, tension, guilt, and ability to continue daily roles. Screening should be embedded in a pathway rather than conducted as an isolated measurement exercise. Caregivers with mild or transient difficulties may benefit from information, reassurance, and practical planning; those with persistent distress may require structured psychological support; and severe symptoms, functional impairment, or safety concerns warrant formal mental-health assessment.

Second, support interventions should focus on perceived adequacy as well as availability. Asking whether a caregiver has help is insufficient. Teams can ask whom the caregiver trusts, whether they can speak openly, whether responsibilities can be shared, and whether support is actually accessible at moments of need. Family meetings can clarify roles and reduce ambiguity. Peer groups or telephone-based support may be useful where travel is difficult, provided privacy, language, and cultural acceptability are considered. Community health workers may help identify distressed caregivers and connect them to services when they receive appropriate training, supervision, and referral options.

Third, coping-focused work should be mechanism-informed. Psychoeducation can distinguish controllable from uncontrollable problems. Problem-solving can support concrete action where action is possible. Acceptance and emotion-regulation skills can be used where the underlying reality cannot be changed. Counselling can

address self-blame and guilt, while motivational and supportive approaches can explore disengagement or denial without confrontation. The aim is not to prescribe a single ideal coping style but to increase flexibility and fit between strategy and situation.

Fourth, interventions in tribal and rural contexts must be logistically and culturally responsive. Keerthana and Kubendran (2025) show that access barriers can be simultaneous rather than isolated. An awareness campaign will have limited effect if transport, affordability, language, or service availability remain unresolved. Likewise, importing a counselling model without local adaptation can reduce acceptability. Community stakeholders should be involved in defining relevant support, identifying trusted delivery channels, and interpreting psychological constructs. Such participation can prevent the deficit framing of tribal communities and can identify existing sources of resilience.

The study also has implications for future intervention research. Reviews of psychosocial and palliative-care interventions show heterogeneous effects (Hudson et al., 2010; Nowels et al., 2023; Yan et al., 2024; Yıldız et al., 2024). One reason may be that programmes combine many components without identifying which mechanism is expected to change. The present findings nominate perceived support, denial, active coping, and self-blame as candidate mechanisms for prospective testing. A future trial could assess whether a brief caregiver programme changes these variables and whether those changes temporally precede reductions in distress. Mediation should be tested only with adequate sample size and repeated measurement.

Several limitations constrain interpretation. The sample was small and context-specific, limiting precision and external generalisability. The design was cross-sectional, so reciprocal causation is plausible. Self-report measures are appropriate for subjective distress and support but can be affected by literacy, social desirability, interviewer

presence, and cultural response styles. Patient diagnosis, illness severity, functional dependence, caregiving hours, respite, and financial strain were not available as detailed covariates. The exact tribal group, field location, sampling procedure, language of administration, and ethics approval reference were not established in the reliable manuscript materials. These omissions prevent culture-specific claims and should be corrected from original records before submission.

A further limitation concerns instrument provenance. The analytical dataset contains item structures corresponding to DASS-21, Brief COPE, and MSPSS, while a separate short questionnaire does not reproduce those structures. Statistical coherence cannot substitute for documentation of what participants actually completed. The journal manuscript should therefore be submitted only after the research team verifies the administered instrument, permissions where required, translation or oral-administration procedures, scoring key, consent documentation, and ethics record. Preserving this boundary is essential for research integrity.

A further implication concerns the distinction between caregiver screening and caregiver surveillance. Repeated assessment should be experienced as an offer of support, not as another obligation imposed on families already managing serious illness. Short measures can be useful when they lead to a clear response pathway, but routine collection without feedback or referral may add little value. Services should specify who reviews caregiver scores, what thresholds prompt a conversation, how urgent concerns are escalated, and how confidentiality is handled when patient and caregiver needs differ. This is particularly important in close-knit communities where privacy concerns can affect willingness to disclose distress.

The findings also suggest that caregiver outcomes should be considered in quality improvement. Palliative-care programmes commonly monitor patient symptoms, service contacts, and place of care. Adding carefully selected caregiver

indicators could make family well-being more visible. Appropriate indicators might include preparedness for symptom management, perceived adequacy of support, access to respite, confidence in contacting the team, and persistent psychological distress. Such monitoring should remain proportionate and culturally acceptable. Its purpose is not to turn family members into secondary patients but to recognise that sustainable home care depends partly on the well-being and capability of those providing it.

For research in tribal-community settings, participatory design is especially important. Standardised measures offer comparability, but they may not capture locally meaningful expressions of distress or support. Cognitive interviewing can test whether translated items retain their intended meaning; community consultation can identify acceptable terminology; and qualitative work can clarify how duty, reciprocity, spirituality, family authority, and help-seeking are understood. Combining these approaches with quantitative scales can improve both validity and interpretation. It can also reduce the risk that statistically convenient constructs are mistaken for complete representations of caregiver experience.

These service and research implications should be interpreted together. Psychological support is unlikely to be effective when practical barriers remain untouched, and practical assistance may not resolve persistent guilt, anxiety, or hopelessness. Integrated palliative care therefore requires coordination among clinical teams, counsellors, community workers, and family networks. The appropriate balance will differ across communities, but the organising principle is consistent: caregiver well-being should be assessed in relation to both lived context and modifiable psychosocial processes.

Finally, the present pattern argues for replication rather than premature clinical prediction. The regression models explain a large proportion of variance, but estimates from a small single sample can be unstable. A larger multisite study could

preregister a limited predictor set, assess caregiving intensity and patient dependence, and use internal validation or cross-validation. Repeated assessments would permit analysis of within-caregiver change and could test whether support or coping at one time point predicts later distress after accounting for prior symptoms. That design would move the evidence from cross-sectional co-occurrence toward temporal explanation while preserving the clinically relevant distinctions identified here.

Despite these limitations, the study contributes an integrated account of distress, coping, and support in an underrepresented caregiving context. Its main contribution is not a claim that demographic characteristics are unimportant or that specific coping strategies are universally adaptive. Rather, it shows that within this sample, subjective relational resources and coping patterns were more consistently associated with emotional symptoms than broad background categories. This directs attention toward modifiable psychosocial processes while retaining the structural and cultural context in which those processes occur.

VI. CONCLUSION

Family caregivers are part of the palliative-care unit, yet their emotional health can remain hidden behind the practical work they perform. In this sample, depression, anxiety, and stress symptoms were substantial. Perceived social support was consistently associated with lower distress, while coping strategies showed differentiated relationships: denial, behavioural disengagement, venting, self-distraction, and self-blame accompanied greater distress, whereas active coping, positive reframing, acceptance, and religious coping generally accompanied lower distress. Broad demographic and caregiving categories did not show a comparable pattern.

These findings support a family-centred model in which caregiver assessment is routine, support is evaluated for quality and adequacy rather than mere presence, and coping interventions are tailored to the controllability and meaning of

specific demands. They also reinforce the need for culturally responsive, community-linked service models in settings where specialist access may be constrained. The results are cross-sectional and should be treated as associations, not causal effects or diagnostic prevalence. Larger longitudinal studies with verified field documentation, culturally grounded measurement, and detailed caregiving-demand variables are required. Before publication, the research team should also reconcile the instrument and ethics documentation with original field records. With those safeguards, the present pattern provides a useful empirical basis for developing and testing caregiver-focused psychosocial support in palliative care.

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