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# Psychosocial adjustment and unmet care needs in schizophrenia

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**Abstract:**
Schizophrenia is a chronic psychiatric disorder in which symptom control alone often fails to restore psychosocial functioning and address supportive care needs. Therefore, it is of interest to assess the psychosocial adjustment and supportive care needs among 60 patients with schizophrenia attending the Institute of Mental Health, Chennai, using the Psychosocial Adjustment to Illness Scale (PAIS) and the Camberwell Assessment of Need Short Appraisal Schedule-Patient version (CANSAS-P). The mean PAIS score was 58.73 ± 19.75, with 51.67% of participants demonstrating moderate adjustment, while the mean CANSAS-P score was 47.43 ± 5.11, with 66.67% exhibiting high supportive care needs. A significant negative correlation was observed between psychosocial adjustment and supportive care needs ($r = -0.38$, $p = 0.01$), indicating that poorer adjustment was associated with greater unmet needs. Thus, data support the integration of targeted psychosocial nursing interventions to improve adjustment, reduce supportive care needs and enhance functional outcomes in patients with schizophrenia.

**Keywords:** Schizophrenia, psychosocial adjustment, supportive care needs, psychosocial adjustment to illness scale (PAIS), camberwell assessment of need short appraisal schedule-patient (CANSAS-P), psychiatric nursing, tertiary care cross-sectional study

**Background:**
Schizophrenia is a persistent and often debilitating psychiatric disorder characterised by disturbances in cognition, perception, emotion and behaviour, typically emerging in late adolescence or early adulthood. It constitutes a primary driver of the global burden of mental illness, with an estimated 23.6 million people affected worldwide in 2019 and the condition accounting for substantial years lived with disability across 204 countries **[1].** Despite advances in pharmacotherapy, schizophrenia remains associated with profound long-term disability, social marginalisation and impaired quality of life, reflecting the inadequacy of medication alone to restore holistic functioning. The epidemiological landscape in India is particularly concerning. The National Mental Health Survey reported a lifetime prevalence of schizophrenia spectrum disorders at 1.41% and a current prevalence of 0.42% among adults, accompanied by a treatment gap of 72% that rises to 83.3% in urban non-metro areas **[2].** These figures underscore a massive unmet service need, particularly in tertiary public sector psychiatric facilities such as the Institute of Mental Health, Chennai, which cater to large volumes of patients from diverse socioeconomic backgrounds with limited access to community, based mental health support. Symptomatic improvement does not automatically translate into restored social, vocational or family functioning. Internalised stigma, diminished self-esteem and inadequate social support collectively account for a significant proportion of the variance in quality of life among adults with schizophrenia, surpassing the explanatory power of most conventional clinical predictors **[3].** Furthermore, antipsychotic treatment-related concerns about body image and self-esteem may influence medication adherence. A community-based study found that more than half of the patients had poor adherence, with adherence positively associated with psychosocial adjustment related to body image and self-esteem **[4].** These findings establish psychosocial adjustment not as a peripheral outcome but as a central mediator of recovery trajectory. Concurrent with adjustment challenges, schizophrenia generates a wide and frequently under-recognised spectrum of supportive care needs. Using the Camberwell Assessment of Need Short Appraisal Schedule (CANSAS), a severely mentally ill outpatient reported a median of nine unmet needs, predominantly in the domains of relationships, sexual expression and illness-related information and a greater number of unmet needs was significantly correlated with diminished quality of life and increased symptom severity **[5].** Qualitative work with Indian patients, families and clinicians has similarly identified medication management, daily living activities, physical health, meaningful work, social networks and illness information as priority targets for psychosocial intervention **[6].** Despite the documented efficacy of evidence based psychosocial interventions-including cognitive remediation, family interventions, supported employment, social skills training and cognitive behavioural therapy for psychosis their implementation in real world clinical settings remains severely constrained **[7].** Therefore, it is of interest to assess the level of psychosocial adjustment and supportive care needs among patients with schizophrenia at a tertiary care psychiatric hospital, examine the correlation between these two constructs and identify their associations with selected demographic and clinical variables.

**Materials and Methods:**
A descriptive cross-sectional design was adopted. The study was conducted over a period of four weeks at the outpatient department of the Institute of Mental Health (IMH), Chennai, Tamil Nadu, India a large tertiary public-sector psychiatric

hospital affiliated with Madras Medical College and The TN Dr MGR Medical University. Ethical approval was obtained from the Institutional Ethics Committee (IEC) of Madras Medical College, Chennai. Administrative authorisation was secured from the Director of IMH. Written informed consent was obtained from all participants before data collection. The study was conducted in accordance with the ethical principles of the Declaration of Helsinki. Confidentiality of participant data was maintained throughout. The sample size was estimated based on a reported prevalence of psychosocial adjustment problems of 41.3% in an earlier Indian study, using the formula $n = Z^2p(1-p)/e^2$ with 95% confidence and 10% relative precision, yielding a minimum of 93. A final sample of 60 patients was recruited through non-probability convenience sampling within the available study window. All patients fulfilling the eligibility criteria and attending the OPD during the study period were approached.

**Inclusion criteria:**
Confirmed clinical diagnosis of schizophrenia; age 18-60 years; ability to understand and communicate in Tamil or English; and willingness to provide informed consent.

**Exclusion criteria:**
Severe cognitive impairment precluding self-report; concurrent severe psychiatric comorbidity (*e.g.,* bipolar disorder, substance dependence); major medical or neurological comorbidities; and enrolment in another concurrent research study. Data were collected using three instruments. (1) A structured socio-demographic and clinical proforma captured age, gender, marital status, religion, education, occupation, income, family type and area of residence, family history of mental illness, substance use, illness onset age, duration, diagnostic subtype, psychiatric hospitalisations, medication adherence and insight. (2) The Psychosocial Adjustment to Illness Scale (PAIS) is a 46-item, clinician-administered scale assessing adjustment across eight domains: health care orientation, vocational environment, domestic environment, sexual relationships, extended family relationships, family environment, social environment and psychological distress. Higher scores indicate poorer adjustment. (3) The Camberwell Assessment of Need Short Appraisal Schedule - Patient version (CANSAS-P) is a validated 22-item instrument assessing patient-reported supportive care needs across domains including daily living, psychotic symptoms, physical health, psychological distress, safety, relationships and information. Higher scores indicate greater unmet need. Content validity of both instruments was confirmed by psychiatric nursing experts. A pilot study on six patients confirmed feasibility and reliability, with each session requiring 10-15 minutes. Data were entered in Microsoft Excel and analysed using SPSS (version not specified). Descriptive statistics (frequency, percentage, mean and standard deviation) were computed for all demographic, clinical and scale variables. Karl Pearson's correlation coefficient was used to examine the relationship between total PAIS and CANSAS-P scores. Chi-square tests were used to assess associations between categorical demographic or clinical variables and the levels of psychosocial adjustment and supportive care needs respectively. A p-value ≤ 0.05 was considered statistically significant and p ≤ 0.01 highly significant.

**Results:**
Of the 60 patients studied, the majority were aged 26-35 years (35.00%), male (71.67%), married (78.33%) and Hindu (78.33%). Educational attainment was predominantly at the higher secondary level (38.33%) and most were engaged in private employment (38.33%). The most common monthly income bracket was ₹5,000-10,000 (30.00%). Seventy percent resided in nuclear families and 70.00% in urban areas. A family history of mental illness was absent in 86.67% of cases, 60.00% were non-smokers and 51.67% did not consume alcohol. Clinically, 48.33% had illness onset between 36-45 years, 43.33% had been ill for 1-5 years and undifferentiated schizophrenia was the most common subtype (35.00%). More than half (56.67%) reported no previous psychiatric hospitalisation, 41.67% reported occasional non-adherence to medication and 58.33% had partial insight into their illness. **Table 1** presents domain-wise PAIS scores. The overall mean PAIS score was 58.73 ± 19.75, representing 42.56% of the maximum possible score of 138, indicating that on average participants fell within the moderate-adjustment range. The highest mean percentage scores-indicating greatest difficulty in adjustment-were observed in vocational environment (53.06%), social environment (49.33%) and sexual relationships (44.56%). Relatively better adjustment was observed in extended family relationships (35.47%) and psychological distress (37.24%), suggesting that family bonds remained a residual protective resource Even in the context of significant overall impairment. As shown in Table 3, distribution of adjustment levels revealed that 51.67% of participants had moderate psychosocial adjustment, 35.00% showed good adjustment and 13.33% demonstrated poor adjustment. Notably, no participant scored at the ceiling of good adjustment and the distribution was skewed towards the moderate-to-poor range, indicating pervasive residual functional impairment Supportive Care Needs-CANSAS-P Domain Scores and Levels (Tables 2 and 4) As shown in Table 2, the mean total CANSAS-P score was 47.43 ± 5.11, representing 71.86% of the maximum possible score of 66, indicating a substantially high level of unmet supportive care need across the sample. The most demanding domains were safety to others (81.67%), psychological distress (79.00%), safety to self (77.67%), information on medication (76.67%) and psychotic symptoms and physical health (both 76.00%). These findings indicate that perceived risk-related and symptom-related domains dominated the unmet need profile, followed closely by informational and relational needs. Table 4 shows the distribution of need levels. A striking 66.67% of participants were classified as having high supportive care needs and 33.33% had moderate needs. Crucially, none of the 60 participants reported having no supportive care need, confirming the universality of unmet need in this clinical population and the inadequacy of pharmacotherapy alone to address the holistic requirements of patients with schizophrenia Karl Pearson's

correlation analysis revealed a statistically significant negative fair correlation between total PAIS and CANSAS-P scores ($r = -0.38$, $p = 0.01$). This indicates that as psychosocial adjustment improved (lower PAIS scores), the magnitude of unmet supportive care needs decreased (lower CANSAS-P scores) and vice versa. The direction and magnitude of this relationship confirm that psychosocial adjustment and supportive care needs are inversely and meaningfully related constructs, lending support to integrated intervention frameworks that address both simultaneously. As shown in Table 5, chi-square analysis revealed that psychosocial adjustment was significantly associated with gender ($\chi^2 = 5.92$, $p = 0.05$), educational qualification ($\chi^2 = 10.33$, $p = 0.05$) and number of psychiatric hospitalisations ($\chi^2 = 15.06$, $p = 0.01$). Females showed better adjustment than males (88.2% moderate-to-good vs 62.8%), graduates demonstrated good adjustment more frequently than those with primary education (71.4% vs 6.3%) and patients with no prior hospitalisation showed predominantly good adjustment (64.7%) compared with those hospitalised more than five times (0.0% good adjustment). Other demographic variables including age, marital status, income, family type and diagnostic subtype were not significantly associated with psychosocial adjustment. Table 6 presents the associations with supportive care needs. Educational qualification ($\chi^2 = 8.18$, $p = 0.05$), area of residence ($\chi^2 = 6.00$, $p = 0.05$) and duration of illness ($\chi^2 = 9.87$, $p = 0.05$) were significantly associated with the level of unmet supportive care need. Graduates were more likely to have moderate needs (64.3%) compared with those with primary education (18.75%), suggesting that higher literacy facilitates identification and articulation of available resources. Rural residents showed a substantially higher burden of high need (85.7%) compared with urban residents (57.1%), while patients ill for 6-10 years demonstrated the highest proportion of high supportive care needs (88.2%), exceeding even those ill for more than 10 years (80.0%).

**Table 1:**Domain-wise mean pain scores and percentage of domain maximum (n = 60). Higher scores indicate poorer psychosocial adjustment

| PAIS Domain | Mean Score | SD | Mean (% of Domain Maximum) |
|---|---|---|---|
| **Vocational Environment** | 10.61 | 3.82 | 53.06% |
| **Social Environment** | 9.37 | 3.14 | 49.33% |
| **Sexual Relationships** | 8.01 | 3.27 | 44.56% |
| **Domestic Environment** | 7.43 | 2.91 | 41.28% |
| **Health Care Orientation** | 7.3 | 2.76 | 40.56% |
| **Psychological Distress** | 5.22 | 2.41 | 37.24% |
| **Extended Family Relationships** | 4.05 | 1.93 | 35.47% |
| **Total PAIS Score** | **58.73** | 19.75 | 42.56% of 138 |

**Table 2:** Domain-wise mean CANSAS-P scores and percentage of domain maximum (n = 60). Higher scores indicate greater unmet supportive care need

| CANSAS-P Domain | Mean Score | SD | Mean (% of Domain Maximum) |
|---|---|---|---|
| **Safety to Others** | 5.39 | 0.98 | 81.67% |
| **Psychological Distress** | 5.21 | 1.04 | 79.00% |
| **Safety to Self** | 5.13 | 1.01 | 77.67% |
| **Information on Medication** | 5.06 | 1.1 | 76.67% |
| **Psychotic Symptoms** | 5.02 | 0.96 | 76.00% |
| **Physical Health** | 5.02 | 1.08 | 76.00% |
| **Relationships** | 4.87 | 1.15 | 73.82% |
| **Daily Living Activities** | 4.71 | 1.09 | 71.36% |
| **Benefits / Social Entitlements** | 4.58 | 1.21 | 69.39% |
| **Sexual Expression** | 4.41 | 1.18 | 66.82% |
| **Total CANSAS-P Score** | 47.43 | 5.11 | 71.86% of 66 |

**Table 3:** Distribution of participants by level of psychosocial adjustment (PAIS) (n = 60)

| Level of Adjustment | Score Range | n | Percentage (%) | Cumulative (%) |
|---|---|---|---|---|
| **Poor** | 0-46 | 8 | 13.33 | 13.33 |
| **Moderate** | 47-92 | 31 | 51.67 | 65 |
| **Good** | 93-138 | 21 | 35 | 100 |
| **Total** | — | **60** | **100** | — |

**Table 4:** Distribution of participants by level of supportive care need (CANSAS-P) (n = 60)

| Level of Need | Score Range | n | Percentage (%) | Cumulative (%) |
|---|---|---|---|---|
| **No Need** | 0-22 | 0 | 0 | 0 |
| **Moderate Need** | 23-44 | 20 | 33.33 | 33.33 |
| **High Need** | 45-66 | 40 | 66.67 | 100 |
| **Total** | — | **60** | **100** | — |

**Table 5:** Chi-square analysis: associations of significant demographic and clinical variables with level of psychosocial adjustment (n = 60). *p ≤ 0.05 (significant); **p ≤ 0.01 (highly significant)

| Variable | Category | Moderate n | Moderate % | Poor n | Poor % | Good n | Good % | $\chi^2$ / p-value |
|---|---|---|---|---|---|---|---|---|
| **Gender** | Male | 16 | 37.2 | 11 | 25.6 | 16 | 37.2 | |
| | Female | 15 | 88.2 | 2 | 11.8 | 0 | 0 | $\chi^2$=5.92, p=0.05* |
| **Education** | Primary | 8 | 50 | 7 | 43.8 | 1 | 6.3 | |
| | Secondary | 4 | 57.1 | 3 | 42.9 | 0 | 0 | |
| | Higher Secondary | 9 | 39.1 | 5 | 21.7 | 9 | 39.1 | |
| | Graduate & above | 10 | 71.4 | 0 | 0 | 4 | 28.6 | $\chi^2$=10.33, p=0.05* |
| **Hospitalisations** | None | 12 | 35.3 | 0 | 0 | 22 | 64.7 | |
| | 1-2 times | 7 | 58.3 | 4 | 33.3 | 1 | 8.3 | |
| | 3-5 times | 11 | 84.6 | 2 | 15.4 | 0 | 0 | |
| | >5 times | 1 | 100 | 0 | 0 | 0 | 0 | $\chi^2$=15.06, p=0.01** |

**p ≤ 0.05 (significant)*

**Table 6:** Chi-square analysis: associations of significant demographic and clinical variables with level of supportive care need (n = 60)

| Variable | Category | Moderate n | Moderate % | High n | High % | $\chi^2$ / p-value |
|---|---|---|---|---|---|---|
| **Education** | Primary | 3 | 18.8 | 13 | 81.3 | |
| | Secondary | 2 | 28.6 | 5 | 71.4 | |
| | Higher Secondary | 6 | 26.1 | 17 | 73.9 | |
| | Graduate & above | 9 | 64.3 | 5 | 35.7 | $\chi^2$=8.18, p=0.05* |
| **Residence** | Rural | 2 | 14.3 | 12 | 85.7 | |
| | Semi-urban | 0 | 0 | 4 | 100 | |
| | Urban | 18 | 42.9 | 24 | 57.1 | $\chi^2$=6.00, p=0.05* |
| **Duration of Illness** | <1 year | 5 | 71.4 | 2 | 28.6 | |
| | 1-5 years | 11 | 42.3 | 15 | 57.7 | |
| | 6-10 years | 2 | 11.8 | 15 | 88.2 | |
| | >10 years | 2 | 20 | 8 | 80 | $\chi^2$=9.87, p=0.05* |

**Discussion:**

The present descriptive cross-sectional study examined psychosocial adjustment and supportive care needs in 60 patients with schizophrenia attending the outpatient department of the Institute of Mental Health, Chennai. The study yielded four principal findings: a predominance of moderate psychosocial adjustment, universally high unmet supportive care needs, a significant inverse correlation between the two and distinct demographic and clinical predictors for each outcome. These findings are discussed below in the context of the existing literature. The finding that 51.67% of participants showed moderate psychosocial adjustment and 13.33% poor adjustment-with the highest impairment in vocational and social domains-is consistent with international and Indian evidence regarding the functional consequences of schizophrenia. Teo *et al.* **[8]** conducted a study among long-stay patients with schizophrenia in a Malaysian institution and reported that 47.8% had moderate and 16.7% severe cognitive impairment, with female gender, prior unemployment, severe cognitive impairment, longer illness duration and negative symptoms as significant predictors of poorer functioning. These predictors mirror the gender and hospitalisation associations identified in the present study. The relatively better performance in extended family relationships (35.47%) compared with vocational and social domains corroborates the protective role of familial social networks in South Asian schizophrenia populations, where joint family structures and cultural emphasis on kin support may partially buffer adjustment even when occupational and broader social functioning remain impaired. The observation that 66.67% of participants had high supportive care needs and that not a single participant reported having no need represents a particularly compelling finding. This universality of unmet need aligns with Mohebbi *et al.* **[5],** who documented a median of nine unmet needs among severely mentally ill outpatients using the CANSAS, predominantly in the areas of relationships, sexual expression and illness information-domains that closely overlap with the highest-scoring CANSAS-P domains in the present study (safety to others 81.67%, psychological distress 79.00%, information on medication 76.67%). Kochhar *et al.* **[9]** similarly found persistent unmet psychosocial needs and caregiver burden even after months of routine outpatient care, highlighting the inadequacy of appointment-based psychiatric management without structured need assessment. The findings of AshaRani *et al.* **[10],** which identified company, intimate relationships, psychotic symptoms, money and sexual expression as the most frequently unmet needs in early psychosis patients in Singapore, further support the cross-cultural robustness of the high-need profile observed here. The significant negative fair correlation ($r = -0.38$, $p = 0.01$) between psychosocial adjustment and supportive care needs confirms that these are not independent constructs: patients with poorer psychosocial adjustment carry a heavier burden of unmet need and vice versa. This inverse relationship has important clinical implications, as it suggests that intervening to improve psychosocial adjustment-through structured social skills training, vocational rehabilitation or family psychoeducation - may simultaneously reduce downstream supportive care demands. Kurtz and Mueser **[11]** showed in a meta-analysis that social skills training produced moderate effect sizes for community functioning ($d \approx 0.52$) and negative symptoms ($d \approx 0.40$) in schizophrenia, providing an evidence base for the type of intervention that could target both constructs simultaneously. Barlati *et al.* **[7]** similarly concluded that integrated psychosocial interventions, particularly when delivered alongside pharmacotherapy, produced clinically meaningful improvements in functioning that pharmacotherapy alone could not achieve. The associations of poorer psychosocial adjustment with male gender, lower education and frequent hospitalisations and of higher unmet needs with lower education, rural residence and 6-10 years of illness duration, are contextually coherent and consistent with prior Indian data. Moummourtty *et al.* **[12]** reported that 76.9% of schizophrenia patients attending a South Indian tertiary care centre had rehabilitation needs, with lower education and rural residence as significant correlates-findings that directly replicate the significant associations identified in **Tables 5 and 6.** The finding that rural residents had substantially higher unmet needs (85.7% high need) than urban residents (57.1%) reflects the structural disadvantage of limited access to community mental health services, peer support groups and rehabilitation facilities in rural Tamil Nadu. The peak of unmet needs at 6-10 years of illness duration, exceeding even longer-ill patients, may reflect a critical window in the illness trajectory where initial social support networks have been eroded but illness-specific coping strategies have not yet been consolidated. Lal *et al.* **[13]** further confirmed that perceived social support particularly from family-was a central determinant of patient satisfaction and care experience in schizophrenia, reinforcing the importance of family centred nursing interventions identified as a priority in the present sample. The limitations of this study should be acknowledged alongside its strengths. The single-centre convenience sample restricts generalisability to other psychiatric settings and populations **[14]**. The four-week data collection window and cross-sectional design preclude causal inference or assessment of long-term outcomes. The sample size of 60, while pragmatically limited by the study window, is smaller than the estimated minimum of 93, reducing statistical power for subgroup analyses. The reliance on self-report instruments may introduce social desirability bias and the absence of a healthy comparison group or microbiological correlates limits mechanistic interpretation **[15, 16]**. Despite these constraints, the study's strengths include the simultaneous assessment of both psychosocial adjustment and supportive care needs using validated standardised tools in a real-world public psychiatric outpatient setting, providing practically relevant baseline data for a previously under-characterised tertiary care population in South India.

**Conclusion:**

Most schizophrenia patients demonstrated moderate psychosocial adjustment, with vocational and social functioning most impaired and high supportive care needs prevalent. Poorer psychosocial adjustment was associated with greater supportive

care needs, highlighting the importance of individualised, multidomain assessment. Integrating psychosocial assessment, psychoeducation, family-centred counselling and rehabilitation-focused nursing interventions may improve holistic recovery and daily functioning.

**Conflict of interest:** The authors declare no conflict of interest.

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