

Baseline Profile of Persons with Schizophrenia Attending a Psychiatric Day-Care Centre: An Assessment of Negative Symptoms, Social Functioning and Quality of Life

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Abstract

Background

Schizophrenia is a severe psychiatric disorder that affects clinical, social and functional domains of life. Although pharmacological treatment is effective in reducing many positive symptoms, negative symptoms may persist and substantially interfere with motivation, interpersonal relationships, social participation and occupational functioning.

Aim

To assess the baseline clinical and psychosocial profile of persons with schizophrenia attending a psychiatric day-care centre, with particular focus on negative symptoms, social functioning and quality of life.

Methods

A baseline assessment was conducted among 25 persons with schizophrenia attending a day-care centre in a tertiary care psychiatric setting. Participants were selected using total enumeration technique. Sociodemographic and clinical information was collected. Negative symptoms were assessed using the Scale for the Assessment of Negative Symptoms (SANS), social functioning using the Vellore Assessment of Social Performance (VASP), and quality of life using the WHOQOL-BREF. Descriptive statistics were used to summarise participant characteristics and baseline assessment scores.

Results

The mean duration of illness was 4.88 ± 1.76 years and the mean duration of treatment was 4.44 ± 1.69 years. The mean baseline SANS score was 75.80 ± 3.88 , the mean VASP score was 29.92 ± 4.22 , and the mean WHOQOL-BREF score was 65.56 ± 9.03 .

Conclusion

The baseline profile indicates substantial negative symptomatology accompanied by social and quality-of-life difficulties among persons with schizophrenia attending a psychiatric day-care centre.

Introduction

Schizophrenia is a severe and heterogeneous psychiatric disorder characterised by disturbances in perception, thought, cognition, affect and behaviour, accompanied by varying degrees of functional impairment. Although hallucinations and delusions are often the most clinically conspicuous manifestations, long-term disability is substantially influenced by domains beyond acute psychosis, particularly negative symptoms, social functioning and quality of life (QoL) (Galderisi et al., 2018; Marder & Galderisi, 2017). Consequently, contemporary approaches to schizophrenia increasingly emphasise functional recovery, social participation and meaningful community living rather than symptom reduction alone.

Negative symptoms constitute a core dimension of schizophrenia and include reductions in motivation, pleasure, interest, emotional expression, speech and social engagement. Contemporary conceptualisation broadly distinguishes two dimensions: avolition-apathy, encompassing diminished motivation, anhedonia and asociality, and expressive deficits, encompassing blunted affect and alogia (Galderisi et al., 2018). This distinction is clinically important because negative symptoms are multidimensional and may differ in their relationships with cognition, functioning and treatment response. Furthermore, negative symptoms may be primary features of schizophrenia or occur secondarily to depression, medication effects, psychotic symptoms or environmental deprivation. Accurate assessment is therefore essential for appropriate treatment and rehabilitation planning. A systematic review of social networks in schizophrenia further found that smaller social networks were associated with greater negative symptom severity (Degnan et al., 2018). Reduced social participation may therefore represent not only an outcome of illness but also a pathway through which disability and social isolation are maintained.

The present study was conducted among persons with schizophrenia attending the psychiatric day-care centre of the Dharwad Institute of Mental Health and Neurosciences (DIMHANS), Dharwad, Karnataka. The participants were characterised by predominantly negative symptoms and were assessed before participation in a structured SST programme. The baseline assessment incorporated the Scale for the Assessment of Negative Symptoms (SANS) to quantify negative symptom severity, the Vellore Assessment of Social Performance (VASP) to assess social functioning and the WHOQOL-BREF to assess QoL. Sociodemographic and clinical characteristics, including age, sex, education, marital status, occupation, residence, duration of illness, duration of treatment and medication adherence, were also documented. The selection of SANS, VASP and WHOQOL-BREF was theoretically and clinically purposeful. SANS captures clinical negative symptom burden, VASP assesses observable social performance and WHOQOL-BREF captures the individual's broader subjective experience of well-being. Examining these domains together allows the baseline profile to be understood across three complementary levels: clinical symptom burden, observable social functioning and perceived QoL. The present study aimed to assess the baseline clinical and psychosocial profile of persons with schizophrenia attending a psychiatric day-care centre, with particular emphasis on negative symptoms, social functioning and QoL, prior to structured SST. By integrating these domains within a single baseline assessment, the study seeks to establish a clinically meaningful foundation for psychosocial rehabilitation and subsequent evaluation of intervention-related change.

Methods and materials

Study Design

A descriptive, cross-sectional baseline assessment design was adopted to characterise the clinical and psycho-social profile of persons with schizophrenia prior to participation in a structured Social Skills Training programme. The baseline assessment focused on three principal domains: negative symptoms, social functioning and quality of life. Socio-demographic and selected clinical characteristics were also assessed to provide a comprehensive description of the study population. The study was designed as the baseline component of a broader psychosocial rehabilitation programme. The present manuscript reports the characteristics and inter-relationships of the variables assessed at baseline and does not evaluate the effectiveness of the subsequent intervention. The data was collected in July 2024 prior to the social skills training.

Study Setting

The study was conducted at the psychiatric day-care centre of a tertiary care psychiatric hospital in Karnataka. The day-care service provides continuing psychiatric care and psychosocial rehabilitation for persons with severe mental disorders. The setting provides opportunities for structured therapeutic activities, social interaction and rehabilitation-oriented services.

Study Population

The study population comprised persons diagnosed with schizophrenia who were attending the psychiatric day-care service during the study period. Participants were considered eligible when they met the pre-defined eligibility criteria and were clinically suitable for participation in the assessment. The study specifically focused on individuals with predominantly negative symptoms because the subsequent rehabilitation programme was designed to address difficulties in social functioning and interpersonal performance.

Eligibility Criteria

Inclusion criteria

Participants were eligible for inclusion if they:

- had a clinical diagnosis of schizophrenia;
- were attending the psychiatric day-care centre during the study period;
- demonstrated predominantly negative symptoms based on the predefined clinical criteria;
- were able to understand and communicate adequately in the language(s) used for assessment;
- Provided informed consent to participate.

Exclusion criteria

Participants were excluded if they:

- had a major neurological disorder or other medical condition substantially affecting cognitive or social functioning;
- had a co-morbid psychiatric condition that could substantially interfere with the assessment;
- had severe cognitive or communication difficulties preventing reliable completion of the assessment; or
- Were unable to provide informed consent.

Sampling Technique and Sample Size

A total enumeration sampling technique was used. All individuals attending the psychiatric day-care centre during the study period who fulfilled the predefined eligibility criteria were considered for participation. Thus, rather than selecting a subset of eligible individuals through purposive or convenience sampling, the study attempted to include the entire accessible eligible population within the study setting and study period. A total of 25 participants fulfilled the eligibility criteria and completed the baseline assessment and were therefore included in the final baseline analysis.

Tools of data collection

Socio-demographic and Clinical Proforma: A structured proforma was used to collect relevant socio-demographic and clinical information. Socio-demographic variables included age, sex, education, marital status, occupation, religion and residence. Clinical information included duration of illness, duration of treatment and medication adherence.

Scale for the Assessment of Negative Symptoms: The Scale for the Assessment of Negative Symptoms (SANS) was used to assess the severity of negative symptoms in schizophrenia. The scale evaluates several domains of negative symptomatology, including affective flattening or blunting, alogia, avolition-apathy, anhedonia-asociality and attention impairment. The SANS provides a structured assessment of the severity of negative symptoms and has been widely used in schizophrenia research and clinical assessment (Andreasen, 1982). For the present study, the total SANS score was used as the principal measure of negative symptom severity.

Vellore Assessment of Social Performance: Social functioning was assessed using the Vellore Assessment of Social Performance (VASP). The researchers sought permission from the scale authors before conducting the study.

WHOQOL-BREF: Quality of life was assessed using the WHOQOL-BREF, a multidimensional quality-of-life instrument consisting of 26 items covering overall quality of life and general health together with four principal domains: physical health, psychological health, social relationships and environment (Skevington et al., 2004). The WHOQOL-BREF was selected because it provides a multidimensional

assessment of perceived quality of life rather than restricting assessment to psychiatric symptoms or functional disability.

Data Collection Procedure: Following approval from the institute ethics committee, eligible participants attending the psychiatric day-care centre were identified during the study period. The purpose and procedures of the study were explained to eligible participants and written informed consent was obtained before data collection. The assessment was completed before commencement of the structured Social Skills Training programme. The data obtained at this stage constituted the baseline dataset for the present study.

Ethical Considerations

The study was conducted after obtaining approval from the Institutional Ethics Committee of the Dharwad Institute of Mental Health and Neurosciences via DIMHANS/IEC/10/2024-25 dated 24.06.2024. Written informed consent was obtained from all participants before enrolment. Participants were informed about the purpose and procedures of the study, their voluntary participation and their right to withdraw from the study without affecting their clinical care. Confidentiality of participant information was maintained throughout the study. Data were coded and analysed without using personally identifying information in the research dataset or manuscript.

Statistical Analysis

Data were entered, cleaned and analysed using R software. Descriptive statistics were used to summarise the socio-demographic and clinical characteristics of the participants. Continuous variables were examined for distributional characteristics and summarised using mean and standard deviation (SD) when approximately normally distributed and median and inter-quartile range (IQR) when distributions were markedly non-normal. Categorical variables were summarised using frequencies and percentages. The distributions of the principal continuous variables—SANS, VASP and WHOQOL-BREF scores—were assessed using the Shapiro–Wilk test and graphical examination of the data. As the principal variables demonstrated departures from normality, non-parametric statistical procedures were used for inferential analyses. Associations between negative symptom severity, social functioning and quality of life were examined using Spearman's rank-order correlation coefficient (ρ). Correlations between SANS total score and VASP total score, SANS total score and WHOQOL-BREF total score, and VASP total score and WHOQOL-BREF total score were examined.

Results

Baseline Socio-demographic and Clinical Characteristics

Variable	Characteristics	n (%) / Median (IQR)
Age, years	Median (IQR)	40 (32–44)
	Range	20–60
Sex	Male	12 (48.0)
	Female	13 (52.0)
Education	Primary	14 (56.0)
	High school	6 (24.0)
	PUC/Diploma	1 (4.0)
	Undergraduate	2 (8.0)
	Illiterate	2 (8.0)
Marital status	Married	12 (48.0)
	Unmarried	13 (52.0)
Occupation	Agriculture and allied activities	4 (16.0)
	Self-employment	4 (16.0)
	Coolie	4 (16.0)
	Housewife	2 (8.0)
	Unemployed	11 (44.0)
Religion	Hindu	21 (84.0)
	Muslim	4 (16.0)
Residence	Rural	15 (60.0)
	Urban	10 (40.0)
Duration of illness, years	Median (IQR)	5 (3–5)
	Range	1–10
Duration of treatment, years	Median (IQR)	4 (3–5)
	Range	1–8
Drug adherence	Good	11 (44.0)
	Poor	14 (56.0)
SANS total score	Median (IQR)	77 (73–78)
	Range	69–87

VASP total score	Median (IQR)	30 (27–33)
	Range	17–36
QOL total score	Median (IQR)	67 (65–70)
	Range	35–77

A total of 25 participants were included in the baseline analysis. The median age was 40 years (IQR 32–44) and the age range was 20–60 years overall. There was a near equal distribution by sex, with 13 (52.0%) of the participants being female and 12 (48.0%) being male. Most were primary-school educated. Fourteen participants (56.0%) had completed primary education, while 6 (24.0%) had completed high school. One participant (4.0%) had a PUC/diploma qualification, 2 (8.0%) had undergraduate education, and 2 (8.0%) were illiterate. Regarding marital status, 13 participants (52.0%) were unmarried and 12 (48.0%) were married. Occupationally, 11 participants (44.0%) were unemployed. Agriculture and allied activities, self-employment and coolie work each accounted for 4 participants (16.0%), while 2 participants (8.0%) were housewives. Most participants were Hindu (21, 84.0%), while 4 (16.0%) were Muslim. Fifteen participants (60.0%) resided in rural areas and 10 (40.0%) in urban areas. The median duration of illness was 5 years (IQR = 3–5; range = 1–10 years) and the median duration of treatment was 4 years (IQR = 3–5; range = 1–8 years). In relation to medication adherence, 11 participants (44.0%) were good adherent and 14 (56.0%) were poor adherent.

Baseline Clinical and Psychosocial Outcomes

At baseline, the median SANS total score was 77 (IQR: 73–78; range: 69–87). The median VASP total score was 30 (IQR: 27–33; range: 17–36), while the median QOL score was 67 (IQR: 65–70; range: 35–77). The distribution of all three principal outcome variables was examined using the Shapiro–Wilk test. SANS scores showed a statistically significant deviation from normality ($W = 0.902$, $p = .020$). Similarly, VASP scores were not normally distributed ($W = 0.896$, $p = .015$) while QOL scores were more markedly non-normally distributed ($W = 0.828$, $p < .001$). Table 2 presents the baseline distribution of the 3 main outcomes.

Association	Spearman's ρ	p value	Interpretation
SANS	25	77 (73–78)	69–87
VASP	25	30 (27–33)	17–36
QOL	25	67 (65–70)	35–77

Assessment of normality

Outcome	Shapiro–Wilk W	p-value	Distribution
SANS	0.902	0.020	Non-normal
VASP	0.896	0.015	Non-normal
QOL	0.828	<0.001	Non-normal

The Shapiro–Wilk test indicated that baseline SANS scores were not normally distributed ($W = 0.902, p = .020$). Similarly, baseline VASP scores ($W = 0.896, p = .015$) and QOL scores ($W = 0.828, p < .001$) demonstrated significant departures from normality. Therefore, continuous outcome variables were summarised using medians and inter-quartile ranges, and non-parametric statistical methods were used.

Tests of associations

At baseline, SANS scores were not significantly associated with VASP scores (Spearman's $\rho = -0.047, p = .824, n = 25$), indicating a negligible association between negative symptoms and social functioning in this sample. Similarly SANS scores were not significantly associated with quality of life (Spearman's $\rho = -0.125, p = .551, n = 25$), indicating a negligible association between negative symptoms and quality of life. Similarly, VASP scores were not significantly associated with quality of life at baseline (Spearman's $\rho = 0.011, p = .959, n = 25$), indicating a negligible association between social functioning and quality of life.

Association	Spearman's ρ	p value
SANS–VASP	−0.047	.824
SANS–QOL	−0.125	.551
VASP–QOL	0.011	.959

As illustrated in Figure 1, baseline quality-of-life scores tended to decrease with increasing age. Spearman's rank-order correlation demonstrated a statistically significant moderate negative association between age and quality of life ($\rho = -0.544, p = .005, n = 25$).

Discussion

The present baseline assessment identified clinically relevant impairments across negative symptoms, social functioning, and quality of life among the 25 participants. The three outcome measures demonstrated non-normal distributions, and therefore non-parametric methods were appropriately used. The principal finding was a statistically significant moderate negative association between age and quality of life (Spearman's $\rho = -0.544, p = .005$). In contrast, no statistically significant associations were observed between negative symptoms and social functioning, negative symptoms and quality of life, or social functioning and quality of life.

The lack of a statistically significant association between negative symptoms and quality of life for this sample should be interpreted with caution. Negative symptoms are considered to be an important

determinant of functional disability and patient-centred outcomes in schizophrenia.

A recent systematic review examining negative symptoms and their relationship to health-related quality of life and functional outcomes found evidence for an association across the literature, although the strength of the association varied depending on the negative-symptom construct, outcome measure, and study characteristics (Chan et al., 2026). Similarly, Li et al. (2023) showed the importance of negative symptoms and their individual domains for health-related quality of life in schizophrenia. The findings are important for interpreting the weak negative correlation found in the present study between SANS and QOL ($\rho = -0.125$, $p = .551$).

Caution should also be taken when interpreting the lack of a significant association between SANS and VASP scores ($\rho = -0.047$, $p = .824$). Negative symptoms are motivational, emotional, expressive, and social aspects that may interfere with participation in activities of daily living and interpersonal relationships. Evidence from a large systematic review and meta-analysis has shown a significant association between negative symptoms and social functioning, with the strength of the association varying across studies and measures (Fett et al., 2023). Moreover, longitudinal data from 1,208 people with schizophrenia have indicated associations between social contact, negative symptoms, psychosocial functioning and quality of life (Schoeler et al., 2015).

There was also a negligible correlation between VASP and QOL that was not statistically significant ($\rho = 0.011$, $p = .959$). This finding is at odds with the wider conceptualisation of quality of life as a multidimensional construct encompassing social and functional dimensions, as well as physical and psychological wellbeing. Recent evidence from systematic reviews shows that people with schizophrenia are impaired in several domains of quality of life compared to healthy controls. However, the degree of impairment varies across domains and studies (Wang et al., 2025). Thus, the lack of a significant VASP–QOL relationship in the current sample may suggest that social functioning alone does not adequately explain variation in global QOL.

The most notable finding was the statistically significant moderate negative association between age and baseline quality of life ($\rho = -0.544$, $p = .005$). Thus, older participants tended to report poorer quality of life. This finding is clinically plausible in the context of the long-term course of schizophrenia. Schizophrenia is frequently a lifelong disorder, and ageing is accompanied by accumulating physical comorbidity, functional limitations, cognitive difficulties, and changes in social participation that may interact with the effects of chronic psychiatric illness. A systematic review of aging in schizophrenia was conducted by Isohanni and Cowling (2020) who highlighted the need to take account of changes in cognition, functioning, comorbidity, mortality and quality of life as people with schizophrenia get older.

From a clinical perspective, the findings support the use of a multidimensional baseline assessment before initiating psychosocial intervention. The absence of statistically significant relationships among SANS, VASP, and QOL demonstrates that these measures may provide complementary information rather than simply duplicating the same construct. This is particularly relevant for rehabilitation-oriented programmes, where a participant may present with prominent negative symptoms, impaired social

functioning, or reduced quality of life to different degrees. Comprehensive assessment can assist clinicians and social workers in identifying the specific domains requiring intervention.

Limitations of the Study

The present analysis was restricted to baseline data from a broader psychosocial intervention study and therefore does not assess intervention-related changes. The sample was small ($n = 25$) and recruited from a single psychiatric day-care centre, limiting statistical power and generalisability. As only baseline data were analysed, temporal or causal relationships between negative symptoms, social functioning and quality of life cannot be established. The findings should therefore be considered preliminary and interpreted within the context of the study population and baseline assessment.

Conclusion

The baseline assessment identified important difficulties in negative symptoms, social functioning and quality of life among persons with schizophrenia attending a psychiatric day-care centre. A significant moderate negative association was observed between age and quality of life, with older participants reporting poorer quality of life. No significant associations were observed among negative symptoms, social functioning and quality of life at baseline. These findings provide a useful baseline profile for understanding rehabilitation needs and contextualizing the subsequent psychosocial intervention.

References

1. Andreasen NC (1982) Negative symptoms in schizophrenia: Definition and reliability. *Arch Gen Psychiatry* 39(7):784–788. <https://doi.org/10.1001/archpsyc.1982.04290070020005>
2. Azaiez C, Millier A, Lançon C, Clay E, Auquier P, Llorca P-M (2018) Health related quality of life in patients having schizophrenia negative symptoms: A systematic review. *J Market Access Health Policy* 6(1):1517573. <https://doi.org/10.1080/20016689.2018.1517573>
3. Cella M, Roberts S, Pillny M, Riehle M, O'Donoghue B, Lyne J (2023) & others. Psychosocial and behavioural interventions for the negative symptoms of schizophrenia: A systematic review of efficacy meta-analyses. *The British Journal of Psychiatry*, 223(1), 321–331. <https://doi.org/10.1192/bjp.2023.21>
4. Degnan A, Berry K, Sweet D, Abel K, Crossley N, Edge D (2018) Social networks and symptomatic and functional outcomes in schizophrenia: A systematic review and meta-analysis. *Soc Psychiatry Psychiatr Epidemiol* 53(9):873–888. <https://doi.org/10.1007/s00127-018-1552-8>
5. Fusar-Poli P, Papanastasiou E, Stahl D, Rocchetti M, Carpenter WT, Shergill S, McGuire P (2015) Treatments of negative symptoms in schizophrenia: Meta-analysis of 168 randomized placebo-controlled trials. *Schizophr Bull* 41(4):892–899. <https://doi.org/10.1093/schbul/sbu170>
6. Galderisi S, Mucci A, Buchanan RW, Arango C (2018) Negative symptoms of schizophrenia: New developments and unanswered research questions. *Lancet Psychiatry* 5(8):664–677.

[https://doi.org/10.1016/S2215-0366\(18\)30050-6](https://doi.org/10.1016/S2215-0366(18)30050-6)

7. Handest R, Mølstrøm IM, Henriksen MG, Hjorthøj C, Nordgaard J (2023) A systematic review and meta-analysis of the association between psychopathology and social functioning in schizophrenia. *Schizophr Bull* 49(6):1470–1485. <https://doi.org/10.1093/schbul/sbad075>
8. Hadzi Boskovic D, Smith-Palmer J, Pöhlmann J, Pollock RF, Hwang S, Bruhn D (2024) Systematic literature review of studies reporting measures of functional outcome or quality of life in people with negative symptoms of schizophrenia. *Patient Relat Outcome Measures* 15:199–217. <https://doi.org/10.2147/PROM.S454845>
9. Kurtz MM, Mueser KT (2008) A meta-analysis of controlled research on social skills training for schizophrenia. *J Consult Clin Psychol* 76(3):491–504. <https://doi.org/10.1037/0022-006X.76.3.491>
10. Li Y, Rekhi G, Ang MS, Lee J (2023) Impact of negative symptoms on health-related quality of life in schizophrenia. *Front Psychiatry* 14:1252354. <https://doi.org/10.3389/fpsy.2023.1252354>
11. Marder SR, Galderisi S (2017) The current conceptualization of negative symptoms in schizophrenia. *World Psychiatry* 16(1):14–24. <https://doi.org/10.1002/wps.20385>
12. Skevington SM, Lotfy M, O'Connell KA, WHOQOL Group (2004) The World Health Organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial. A report from the WHOQOL Group. *Qual Life Res* 13(2):299–310. <https://doi.org/10.1023/B:QURE.0000018486.91360.00>
13. Turner DT, McGlanaghy E, Cuijpers P, van der Gaag M, Karyotaki E, MacBeth A (2018) A meta-analysis of social skills training and related interventions for psychosis. *Schizophr Bull* 44(3):475–491. <https://doi.org/10.1093/schbul/sbx146>
14. Wang Y-C, Fan H-Y, Huang Q-H, Liu X-C, Huang Y-R, Su Z (2025) & others. Quality of life in patients with schizophrenia: A systematic review and meta-analysis of case-control studies. *Schizophrenia Research*, 286, 112–124. <https://doi.org/10.1016/j.schres.2025.10.019>

Figures

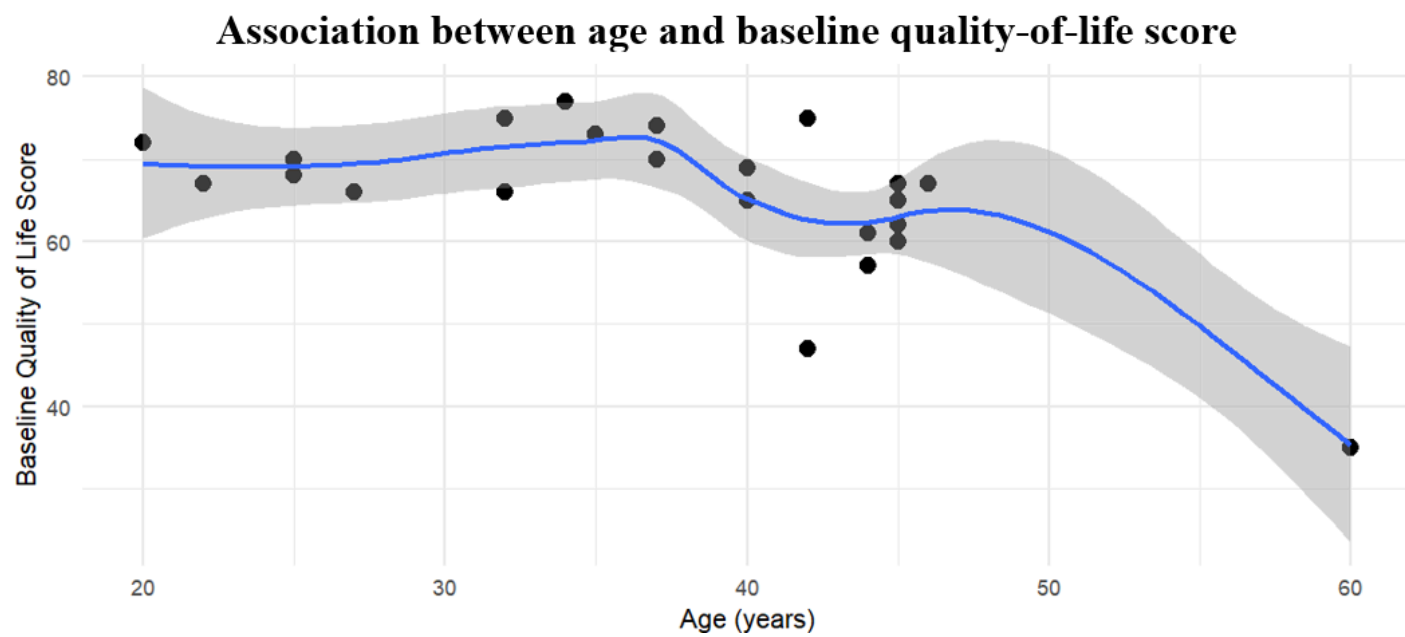


Figure 1

Legend not included with this version