Original Research

Subjective integration and quality of life of Sub-Saharan African migrants in Germany

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ABSTRACT

Objective: This article presents empirical evidence on the quality of life (QoL) of Sub-Saharan African (SSA) migrants in Germany, exploring its association with subjective integration and the influence of some socio-economic and sociodemographic characterics.
Study design: This is a cross-sectional study design using quantitative data from 518 SSA migrants collected across the 16 federal states of Germany, and these data were analysed in this study.
Methods: Association between participants' QoL, measured by the four domains of the Bref version of the World Health Organisation QoL measure, subjective integration and socio-demographic characteristics were evaluated using Pearson product-moment correlations. Stepwise multiple linear regressions were performed to explore the contribution of predictor variables on the QoL domain.
Results: Participants' age averaged 32.5 years (standard deviation [SD] 7.93). The sample reported a low QoL score with a mean score of 64.3 (SD 14.4, range 70.2). Multiple linear regression analyses revealed that subjective integration, age, education and gender had significant associations and explained up to 27% of the variance in the QoL domain scores.
Conclusion: The findings of this study support the conclusion that subjective integration positively and significantly associates with the physical health, psychological health, social relationships and environmental domains of SSA migrants' QoL in Germany.

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Introduction

Although there are no known boundaries to what constitutes a good life, there is a general agreement that a good life includes a sense of satisfaction, fulfilment and belonging in a social, political, economic and cultural environment.[1–4] Over the recent decades, professionals, politicians and academics alike have striven to tackle mounting issues surrounding 'a good life' with efforts that were mostly isolated to specific

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problems (e.g., public health, safety, inclusion, nutrition and disease) but have hoped or were expected to contribute in varying significance to individuals' subjective life quality. This article evaluates the cognitive evaluation of life quality for the understanding of 'good life' and explores its associations with subjective integration of Sub-Saharan African (SSA) migrants in Germany.

A good life is conceptualised as the summarised positive outcome of interventions and interactions affected by a person's psychological state, physical health, personal beliefs, social relations and alliance to salient features of the environment. In recent years, quality of life (QoL) measure has provided researchers with practical categorisations of a 'good life' in a conceptual way that includes aspects of health, environment and social relationships and addresses the diversity and multiculturalism that characterise today's society.[5] QoL is the evidence of 'individuals' perception of their position in life in the context of culture and value systems in which they live and in association with their goals, expectations, standards and concerns.[6]

Social integration encompasses a web of social relationships, activities and interaction with and within one's social environment.[7,8] For migrants, these interactions are often measured in the context of their adaptation to the host values, for example, language, culture and social norms.[9,10] In Germany, the overall outcome of immigrants' well-being was assumed to depend primarily on individual socio-economic performance and success[11]—this assumption is, however, changing. Recent concerns of 'failed integration' have now drawn attention to the importance of immigrants' sense of acceptance and its potential for maximising productivity and improving QoL.[12] This study refers to subjective integration as the cognitive ratings of individuals' perceived recognition and acceptance in their host community.[13] Rather than assessing integration as measured by sociocultural adaptation or socio-economic gain or loss, the present study focuses on SSA migrants' perceived acceptance in the German society.

The region of Africa (Sub-Saharan Africa), south of the vast Sahara desert, comprises 49 sovereign countries and more than 20,000 ethnic groups with varying culture and languages.[14] Apart from these defining geographical bounds, Sub-Saharan Africa is characterised by its shared sociocultural values that place family as the most basic and essential unit of the society and facilitate indigenous welfare practice.[15] Economic and health performance in international comparison[16] and physical features such as brown-black skin tone and woolly hair are other unifying characteristics of this region. These shared realities and elements shape the life experiences of Sub-Saharan Africans and enable holistic research and intervention projects among this group.

The number of SSA migrants in Germany is believed to have risen progressively over the past decades. Although the reported SSA migrant population in Germany has more than doubled since 2009 and increased by 25% between 2015 (269,616) and 2016 (339,287),[17] a large number remains undocumented, leaving us with no authentic assessment of the number of SSA immigrants residing in Germany. The poor welfare state in many SSA countries, rapid population growths and political instability are largely blamed for the intensified flow of migrants from this region.[18] These defining characteristics together with SSA sociocultural features have shaped the group migration experience regarding settlement patterns and barriers;[18] the experience of systematic and racial discrimination[19] and patterns and formation of social networks[20] ultimately play a significant role in determining the group subjective integration outcome.

The QoL and subjective integration of SSA migrants in Germany has, however, until now only been speculated or assumed because of the lack of research from which reliable conclusion could be drawn.[21] This article presents empirical findings on the QoL of SSA migrants in Germany, exploring the association with subjective integration and the influence of some socio-economic and sociodemographic characteristics.

Methods

Study design, population and data collection

This study examines data on SSA migrants' QoL and subjective integration, collected in a cross-sectional online and paper-based survey across the 16 federal states of Germany. Participants in this survey included SSA migrants from one of the 49 Sub-Saharan countries now living in Germany. Study participants were included if they had formal residence status in Germany (i.e., holding the German citizenship or being a citizen of any other European Union [EU] state or holding a permanent or temporary residence status or refugee/asylum seeker status in Germany), were 18 years or older, and lived in one of the 16 German federal states.

Close to 3000 potential participants clicked on the survey online links or were invited to fill out the survey paper-and-pencil questionnaire in English, French or German. More than 80% declined the invitation or abandoned the survey. From the total 532 participants, 373 completed the online questionnaire and 95 filled out the paper-and-pencil survey, whereas the remaining 64 were administered the questionnaire one-on-one or via a telephone interview.

The sample in this survey was reached using a 5-wave approach that breaks down the discriminative referral system into five separate components.[22] Participants' socio-demographic data were compared with data from the 2016 Germany Foreign Population Report (AuslaendBevoelkerung 2016) to check for validity and representativeness of this sample. The results confirmed the sample as a representation of the SSA migrant population in Germany.

Measures

Quality of life
QoL was measured using the Bref version of the World Health Organisation QoL measure (WHOQOL-BREF).[23] The 24 core items are organised into four domains: physical (7 items), psychological (6 items), social relationships (3 items) and environment (8 items). Following the WHOQOL user manual, domain scores are calculated and scaled in a positive direction. These scores were computed to denote individual's perception of QoL in each particular domain by adding up the score of all items within each domain and then transforming the raw score to a standardised 0–100 scale score (i.e., higher

scores denote higher QoL).[23] This comprehensive measure of QoL has been tested and validated as a reliable measure for a culturally diverse population.[24]

Subjective integration

The participants' subjective integration score was generated from five items that measure SSA migrants' satisfaction with life in Germany (item 1); satisfaction with career situation (item 2); satisfaction with income (item 3); likelihood for recommending others to come to Germany (item 4); and feeling welcome in Germany (item 5). On a 5-point Likert scale, the participants were asked to rate to what extent each of the five items applies to aspects of their lives in Germany, 1 meaning 'I do not agree at all' whereas five implying 'I agree completely'. Aggregate subjective integration scores, ranging from 20 through 100, were then computed by averaging the summed score from the five items and multiplying the average score by twenty. This standardised score enables a direct comparison with the QoL scores.

Subjective integration is computed as follows: subjective integration = (mean.5(Item1,Item2,Item3,Item4,Item5))*20.

To better understand the score distribution, the standardised score was categorised into five categories that reflect the item's 5-point Likert scale. Scores from 20 through 35 were categorised as very low, scores from 36 through 51 as low, scores from 52 through 65 as moderate, scores from 66 through 81 as high, and finally, scores from 82 through 100 as very high.

These questions with their corresponding answer options have been tested in a different study and have proven to be useful for gathering information on immigrants' sense of belonging and integration in Germany.[11]

Other variables

Socio-economic and sociodemographic data on age, gender, education, German language competences, length of stay, residence status, primary occupation, income, the region of origin in Africa and the federal state of residence in Germany were collected as a basis for comparison and population categorisation.

Statistical analysis

SPSS missing value analysis shows a low missing data rate, resulting from the online survey setup where most questions were marked as mandatory. However, 14 cases were removed because of excessive missing data and data inconsistency. Multiple data imputation was computed to replace data missing at random for another seven cases with one to three missing data. This method has been shown to produce valid statistical inference and reflects the uncertainty associated with the estimation of the missing data.[25]

Generally, WHOQOL-BREF domain scores were treated as continuous numerical variables (on a scale of 0−100). To better understand the SSA migrants' QoL score, we referred to the population norm by Hawthorne et al.[4] as a basis for score comparison and interpretation. The study by Hawthorne et al.[4] provides preliminary population norms for interpreting the WHOQOL score in different population groups. Randomly sampled community residents from various studies were

pooled and used to examine the properties of the WHOQOL-BREF by age group, gender and health status. The results showed that general norms for the WHOQOL-BREF domains were 73.5 (standard deviation [SD] = 18.1) for the physical health domain, 70.6 (SD = 14.0) for psychological well-being, 71.5 (SD = 18.2) for social relationships and 75.1 (SD = 13.0) for the environment domain.

Descriptive analyses, including frequency, percentage, mean, standard deviation and 95% confidence intervals, were conducted. Pearson's correlations were applied to explore the relationships between sociodemographic characteristics and the QoL domains. Following the overwhelming evidence on the role of gender on QoL performance among other population groups,[22−24] a gender-specific correlation was computed for the QoL domains and other socio-economic and sociodemographic variables. The assumption for the normal distribution of QoL domains was first checked by inspecting score histograms. Each QoL domain score was then plotted against subjective integration to assess the linear relationship and ascertain the fit of a linear regression model. Multiple linear regression analyses were performed to evaluate the association between the dependent variables, QoL domain scores and independent variables, subjective integration, age, gender and education. Alpha was set at $P < 0.05$ for all analyses.

Results

Preliminary analysis shows no significant difference in sociodemographic and socio-economic features such as age, education and occupation, between those who completed the online questionnaire and paper questionnaire. As presented in Table 1, descriptive statistics show that the 518 respondents reported ages ranging between 19 and 56 years, with an average age of 32.5 years (SD 7.93). About three-fifths of the participants were men, and less than 35% were married. In general, SSA migrants in Germany reported high educational attainment, with half having completed a university degree and almost all having some level of formal education. However, when asked about primary occupation, two in every five participants reported working elementary jobs or working as machine operators as their primary occupation. Only about one-third reported being occupied at their qualification level.

Further sociodemographic data show that about half of the study participants migrated from West Africa compared with a little less than 5% from the southern region of Africa. Half of the study participants reported a residence status that requires regular renewal, whereas others have either acquired a permanent residence status or citizenship from one of the EU countries. A descriptive analysis of the state of residence in Germany shows that about one-fourth of the study participants reside in North Rhine-Westphalia (the most populous state in Germany), whereas less than 2% live in Brandenburg (see Table A2 in Appendix).

Quality of life

The results of SSA migrants' subjective QoL as measured by the WHOQOL-Bref are presented in four domains, that is,

Table 1 – Socio-economic and sociodemographic characteristics of Sub-Saharan African migrants in Germany (social capital and quality of life survey 2017 [SCQOL 2017]).

Characteristic	
Percentage of females	38.9
Average age	32.5 years
	Percentage[a]
Marital status	
Single	32.9
Married	34.3
Widowed	.5
Divorced	1.6
In partnership but not married	30.8
Highest educational qualification	
No formal education	1.2
Secondary or elementary education	17.0
Vocational school certificate	31.7
Degree from a university	33.1
Master, technician or equivalent certificate	17.0
German language skill	
Not at all	1.5
A little	25.5
Average	27.4
Well	20.3
Very well	12.5
Native	12.7
Region of origin	
West Africa	49.7
Central Africa	17.9
East Africa	28.0
Southern Africa	4.4
Length of current stay in Germany	
Less than one year	3.5
1–3 years	14.9
3–5 years	15.3
5–10 years	22.2
More than ten years	44.2

[a] Unless stated otherwise.

physical health, psychological health, social relationships and environment. To frame the results, we referred to the population norm by Hawthorne et al.[4] as a basis for score comparison and interpretation. Analyses showed a generally low QoL score with an average score of 64.3 (SD 14.4, range 70.2) across all domains. Among these low scores, the psychological health domain recorded the highest mean score of 69.3 (SD 14.6) and a minimum score of 21.4. The physical health domain reported an average score of 67.2 (SD 15.2) and a minimum score of 33.3. In the third place was the social relationships domain with a mean score of 60.5 (SD 21.2) and a minimum score of 8.3. Finally, the environmental domain recorded the lowest scores with an average score of 60.2 (SD 16.4) and a minimum score of 6.2.

A closer look at the QoL item distribution shows results that justify the reported poor QoL across all domains. For example, more than 90% of the respondents reported having experienced some negative feelings such as blue mood, despair, anxiety and depression, within the last four weeks preceding the survey. Similarly, about 64% were unable to concentrate, close to 60% reported some level of physical pains and about 58% were not satisfied with their sex life,

whereas 80% reported having unmet financial needs. Roughly, 76% did not have enough opportunities for acquiring new information and skills; the same percentage reported not enough participation in and opportunities for recreation/leisure activities (see Fig. 1).

Subjective integration

As shown in Fig. 2, a categorisation of the aggregate score reported that only 40% of the participants scored high or very high in subjective integration, with the remaining 60% reporting a moderate to deficient subjective integration score. A closer look at the distribution of the items shows that only half of the study participants were satisfied with their life in Germany. Similarly, less than 40% reported satisfaction with their career situation, whereas only about 24% were satisfied with income. On the other hand, close to 55% would recommend others to come to Germany. Contrarily, less than half (41.5%) reported feeling welcome in Germany; the remaining were either unsure (37.3%) or felt unwelcome (21.2%) (see Fig. 3).

Correlation matrix by gender and total sample for SSA migrants' sociodemographic characteristics and QoL

A Pearson product-moment correlation coefficient matrix was computed to check the extent and direction of the relationships between SSA migrants' socio-economic and sociodemographic characteristics such as age, educational attainment, residence status and length of residence, the region of origin, German language skills, primary occupation, QoL domains and subjective integration. Further analyses were conducted to access gender differences in these relationships. The results of this analysis are presented in Table 2.

The Pearson product-moment correlation on the total sample (N = 518) shows a moderate to strong correlation coefficient (between .60 and .72), among the four QoL domains. Residence status, length of residence and region of origin show no significant association with any of the domains of QoL. Age showed a negative correlation with all domains of QoL. However, a gender-specific analysis shows a shift in the trend for male SSA migrants (N = 283), showing a negative association between age and male subjective integration, and no significant association was found for age and the social relationship domain of QoL.

Surprisingly, German language skill showed no significant association with QoL domains or subjective integration. Gender-specific analysis, however, showed significant association for German language skill and the social relationships domain of QoL for female SSA migrants and the environmental domain of QoL for male SSA migrants. Furthermore, the total sample (N = 518) shows a weak but significant association for primary occupation and the physical health and psychological health domain of QoL. For the male sample, however, the primary occupation was positively associated with all domains of QoL.

Finally, the correlation matrix shows a positive association between educational attainment and all domains of QoL and subjective integration for the total sample (N = 518). Most of these relationships remain after gender-specific analysis;
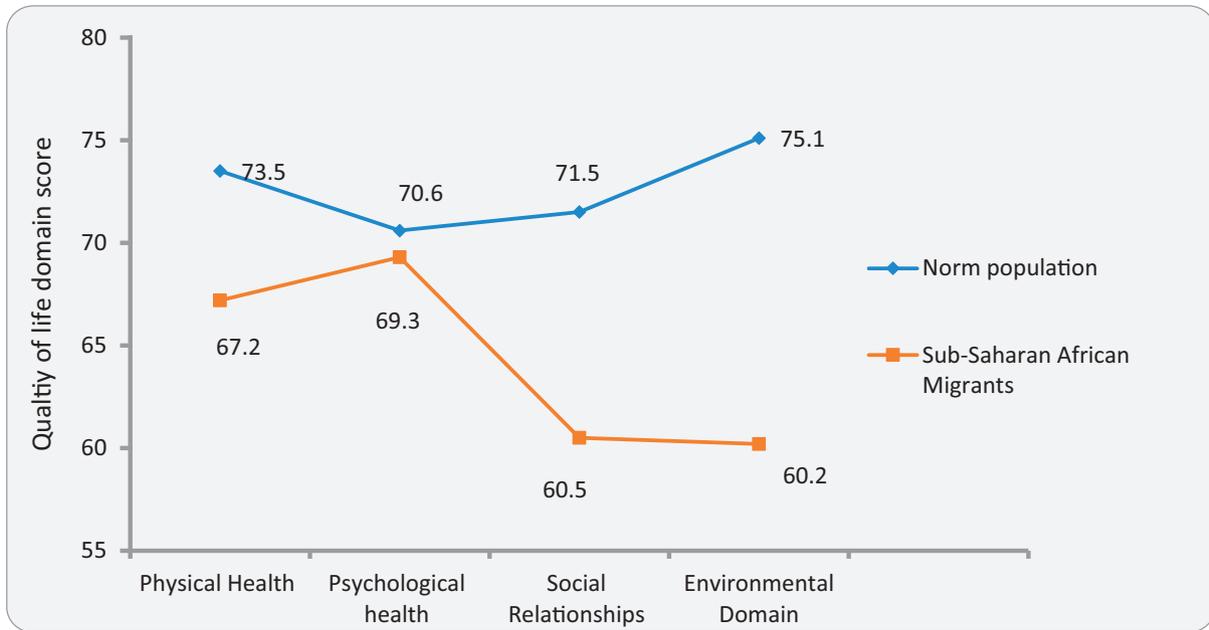
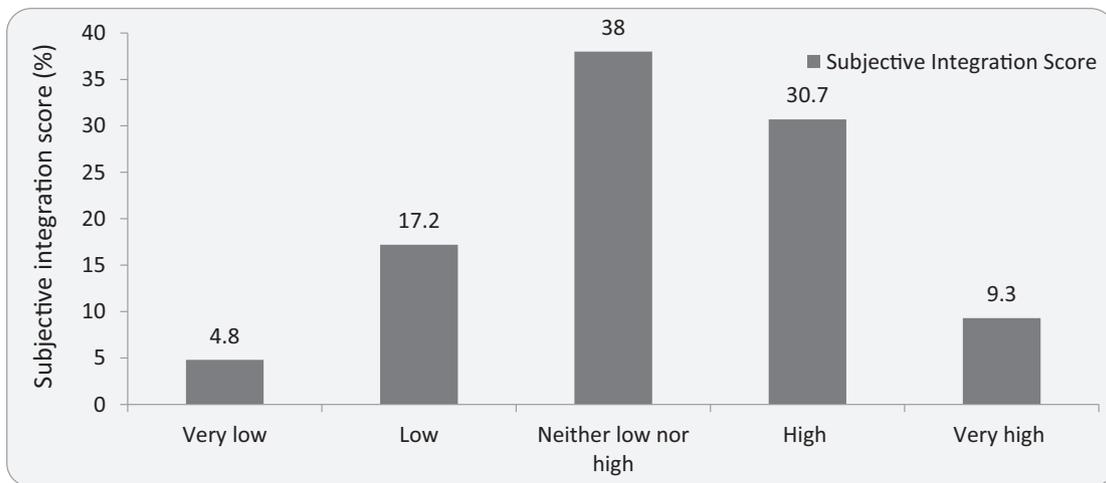**Fig. 1 – Sub-Saharan African migrants quality of life average domain score comparison with norm population.**

Fig. 2 – Percentage distribution of Sub-Saharan African migrants in Germany subjective integration score.

however, for female SSA migrants (N = 235), the association disappear for physical health and subjective integration, whereas these associations remain for education and QoL for male SSA migrants (N = 283).

Regression model for SSA migrants' QoL domains, subjective integration, socio-economic and sociodemographic characteristics

The results from a multiple linear regression using the stepwise method show only age, education and gender showed a significant effect in the association with at least one of the four domains of QoL. Other socio-economic and sociodemographic variables (German language skills, primary occupation, length of stay, residence status and the region of origin) were then excluded from the regression model because of non-correlation.

Subjective integration shows a moderate to a strong association with all four dimensions of QoL. Similarly, educational attainment was significant for all dimensions of QoL. Age as a sociodemographic variable was significant for physical and psychological health as well as the environmental domain, whereas gender only has a significant effect on the social relationship dimension of SSA migrants' QoL.

The R-squared value for the final models ranged from .17 to .34. Younger age with higher subjective integration and higher educational attainments had a positive effect on the physical health, psychological health and environmental domains of QoL. Similarly, for female migrants, higher subjective integration and educational achievements were positively associated with the social relationship domain of QoL.

Subjective integration shows significant association with all four dimensions of QoL. As shown in Table 3, our regression model shows that changes in subjective integration, age
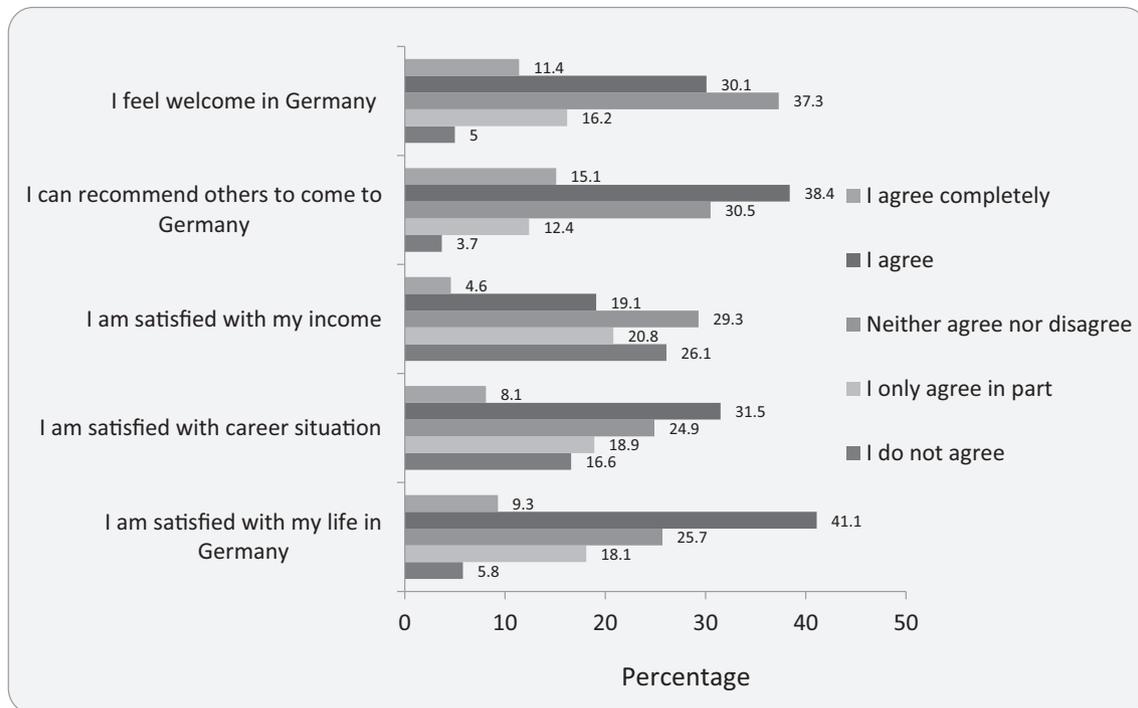
Fig. 3 — Percentage distribution of Sub-Saharan African migrants measure of subjective integration by items.

Table 2 — Correlation matrix by gender and the total sample for Sub-Saharan African migrants' sociodemographic characteristics, quality of life (QoL), satisfaction with life and health and subjective integration (social capital and quality of life survey 2017 [SCQOL 2017]).

		5	6	7	8	9
Total SSA migrants (N = 518)						
1	QoL − physical health	.35[a]	-.22[a]	.05	.09[b]	.20[a]
2	QoL − psychology health	.48[a]	-.19[a]	.02	.11[b]	.27[a]
3	QoL − social relationship	.30[a]	-.11[b]	-.07	.07	.28[a]
4	QoL − environment	.43[a]	-.32[a]	.08	.06	.23[a]
5	Subjective integration	1	-.03	.04	-.00	.10[b]
6	Age		1	-.20[a]	.01	-.04
7	German language skills			1	-.02	-.03
8	Primary occupation				1	.49[a]
9	Education					1
Female SSA migrants (N = 235)						
1	QoL − physical health	.39[a]	-.25[a]	-.01	-.05	.03
2	QoL − psychology health	.54[a]	-.23[a]	-.07	.01	.24[a]
3	QoL − social relationship	.31[a]	-.14[b]	.18[a]	.01	.21[a]
4	QoL − environment	.43[a]	-.40[a]	.02	-.05	.15[b]
5	Subjective integration	1	.02	-.03	-.01	.09
6	Age		1	-.20[a]	.08	-.05
7	German language skills			1	-.10	-.15[b]
8	Primary occupation				1	.45[a]
9	Education					1
Male SSA migrants (N = 283)						
1	QoL − physical health	.32[a]	-.21[a]	.11	.20[a]	.32[a]
2	QOL- psychology health	.43[a]	-.20[a]	.09	.18[a]	.28[a]
3	QOL- social relationship	.29[a]	-.09	.03	.12[b]	.34[a]
4	QOL- environment	.42[a]	-.25[a]	.16[a]	.17[a]	.33[a]
5	Subjective integration	1	-.14[b]	.10	-.04	.05
6	Age		1	-.26[a]	-.13[b]	-.16[a]
7	German language skills			1	.03	.02
8	Primary occupation				1	.47[a]
9	Education					1
		5	6	7	8	9

[a] Correlation is significant at the .01 level (2-tailed).
[b] Correlation is significant at the .05 level (2-tailed).

Table 3 — Regression analysis of SSA migrants' quality of life domains and socioeconomic and demographic characteristic (social capital and quality of life survey 2017 [SCQOL -2017]).

Quality of life domains	Unstandardized coefficients		Beta	R square
	B	Std. error		
Physical health (constant)	**51.11**	**3.90**		.213**
Subjective integration	.29	.04	.31**	
Age	-.40	.08	-.21**	
Educational attainment	3.147	.60	.21**	
Psychological (constant)	**42.91**	**3.54**		.293**
Subjective integration	.40	.03	.44**	
Age	-.26	.07	-.14**	
Educational attainment	2.85	.55	.20**	
Social relationships (constant)	**25.62**	**4.65**		.172**
Subjective integration	.33	.05	.25**	
Educational attainment	6.42	.89	.30**	
Gender	−5.02	1.77	-.12*	
Environmental domain (constant)	**49.30**	**3.84**		.345**
Subjective integration	.38	.04	.39**	
Age	-.74	.07	-.33**	
Educational attainment	3.08	.60	.17**	

**P < 0.001 * P < 0.005.

and education explain about 21% (standard error [SE] 3.9) variance in physical health, 29% (SE 3.5) changes in psychological health and about 35% (SE 3.8) changes in the environmental domain of QoL. Similarly, subjective integration, gender and education explain 17% (4.7) variance in the social relationship domain of QoL.

Discussion

The primary purpose of this study was to examine the role of subjective integration as a predictor of QoL among SSA migrants in Germany. Notwithstanding the issues migrants face because of language and cultural barriers, the results show that SSA migrants' subjective representation of their inclusion, exclusion, marginalisation or discrimination in their host community is vital for their QoL performance. Although subjective integration has not been extensively researched, this finding is congruent with the previous literature where immigrants' exclusion was associated with poor social participation, access to information and other activities that facilitate QoL and health.[29,30]

SSA migrants reported poor QoL scores below the considered minimum threshold for a good life across all domains.[4] The poor psychological domain score reflects the low concentration, high negative feelings and low self-esteem. Physical pain, high need for medical treatment and inability to perform daily tasks characterise the low physical health domain score. For the social relationships domain, poor personal relationships and dissatisfaction with their sex life contributed to the low score. Finally, the low environmental domain score is consequential of neighbourhood safety concerns, unhealthy physical environment, unmet financial needs, not enough opportunities for acquiring new information and skills and fewer opportunities for recreation/leisure activities (see Table A1 in Appendix). These unfortunate trends in SSA migrants' QoL performance transcend into communal disadvantage and were shown to vary with individual subjective integration and influence SSA migrants' relationships with various aspects of their environment. It furthermore highlights the perceived exclusion, the challenges and the consequences for SSA migrants' health, socio-economic well-being and integration in the German society.

The poor subjective integration score reported in the Results section confirms the perceived segregation of SSA migrants and their unique experience of migration within the German society. The alarming dissatisfaction with life, income and career situation is believed to be consequential of unmet physical, health and social needs that motivated migration. Similarly, the low proportion of SSA migrants who feel welcome in Germany arguably highlights the vast experience of systematic and racial discrimination[19] that may affect the overall well-being and integration in the German society.

The evident association between the reported poor QoL and low subjective integration underscores the importance of positive feelings, high self-esteem, physical fitness, improved personal relationships, neighbourhood safety, healthy physical environment, opportunities for acquiring new information and skills and opportunities for recreation/leisure activities as tools for facilitating the inclusion and well-being of SSA migrants in the German societies.

Similarly, higher educational attainment and lower age, as shown in the results, predict the higher score in three of the four domains of QoL (i.e., physical health, psychological health and environmental domain). Similar trends were reported in other studies among different population groups, where older age and low education were associated with lower QoL.[26,31] This association could be explained by the limited access to information, unmet needs, poorer physical health and social relationships[32—34] resulting from lower

education and older age. Gender, on the other hand, has a significant direct effect only on the social relationship dimension of QoL, with female SSA migrants reporting a better QoL score. Although gender was only directly significant for one of the four domains, its possible indirect influences on other domains cannot be ignored. As presented in the correlation matrix, the significance of primary occupation and German language skill as predictors of QoL varies with gender and across the different domains of QoL. Male SSA migrants working lower jobs reported lower QoL across all domains, whereas the results showed no significant association for female migrants. Similarly, German language competence shows a significant association with the male migrants' environmental domain and female SSA migrants' social relationship domain of QoL.

It is, however, worth mentioning that although these findings are in agreement with other studies that show socio-economic and sociodemographic characteristics as a predictor of QoL,[22−24] they contradict other studies where males' perceived well-being was more positively affected by social relationships than their female counterparts'.[35] This trend among the SSA migrants is assumed to have resulted from the regions' traditional role division—where the males are responsible for providing for their immediate and extended family, even back at the country of origin. This responsibility has shown to be disadvantageous for the psychological health, physical health and environmental domains of QoL.[36]

Limitation

A methodological limitation of this study is represented in its sample composition and low response rate. It is estimated that only roughly half of the SSA migrant population living in Germany meets the requirement for participating in the survey. SSA migrants who are unregistered were excluded from the sample because of the uncertainty in the population size, different migration experiences, and distinct socio-economic and political features. Similarly, the impracticality of translating the research questionnaire into various local African languages might have excluded some specific members of the SSA migrants from participating in this study. However, the excluded community members are believed to be minimal because almost all African countries have English or French as an official language, and German is the official language in Germany.

Similarly, the low response rate (20%) is attributed to the length of the survey questionnaire (average of 20 min), low community trust and the strict inclusion criteria. Many of the qualified participants were either sceptics or ignorant of any personal or community benefit of the project. This low will is believed to have remained although the study purpose and implications were highlighted in the survey questionnaire, and the participants' anonymity was guaranteed.

Conclusion

SSA migrants' perception of integration not only is crucial for their economic performance but also matters for the advancement of their physical health, psychological health, social relationships and environmental QoL. This study provides public health officers and policymakers with practical information for facilitating SSA migrants' integration and promoting their QoL through deliberate efforts aimed at reducing the burden of depression and negative feelings, fostering social relationships and neighbourhood safety and creating channels to acquire and share information and skills and opportunities for recreation/leisure activities. Although this study presents researchers with a step forward in collating empirical evidence of life quality among this migrant group, it projects other areas that need to be researched to identify their role in the well-being of SSA migrants. For example, German language competence was not a significant predictor of QoL in this study; its correlation with the social relationship domain of QoL for female SSA migrants implies the need for further investigation. Perhaps, asking individuals about their general language skill may be an overly broad approach that might have ignored specific limitations, strengths and needs arising from lack of such competence.

Author statements

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Appendix

Table A1 — Percentage distribution of quality of life items by domains for Sub-Saharan African migrants in Germany.					
Quality of life items by domains	1	2	3	4	5
Physical health *(domain score: mean = 67.2, SD = 15.2, range = 78.6)*					
3 Activities of daily living [c]	2.1	13.7	32.0	41.9	10.2
4 Dependence on medicinal substances and medical aids [a]	48.8	27.0	17.4	3.7	3.1
10 Energy and fatigue [b]	1.2	9.3	31.7	40.5	17.4
15 Mobility [b]	2.5	7.7	20.1	44.8	24.9
16 Pain and discomfort [a]	40.0	35.7	15.3	8.9	.2
17 Sleep and rest [b]	3.9	23.9	26.1	36.3	9.8
18 Work capacity [b]	.8	14.7	32.6	40.9	11.0
Psychological *(domain score: mean = 69.3, SD = 14.6, range = 66.7)*					
11 Bodily image and appearance [b]	1.2	6.6	22.2	43.1	27.0
26 Negative feeling [a]	9.7	36.7	35.1	17.0	1.5
5 Positive feeling [a]	1.2	14.5	37.3	42.5	4.6
19 Self-esteem [b]	1.2	19.3	26.6	35.7	17.2
6 Spirituality/religion/personal belief [a]	.8	8.3	27.4	40.2	23.4
7 Concentration [c]	3.1	18.7	42.1	32.8	3.3
Social relationships *(domain score: mean = 60.5, SD = 21.3, range = 91.7)*					
20 Personal relationship [b]	3.7	17.0	24.1	37.5	17.8
22 Social relationship [b]	3.1	7.9	30.7	46.1	12.2
21 Sexual relationship [b]	8.5	16.4	33.0	30.1	12.0
Environment *(domain score: mean =60.2, SD =16.4, range = 90.6)*					
12 Financial resources [b]	12.0	27.6	39.2	18.9	2.3
8 Freedom, physical safety and security [a]	4.6	12.0	23.9	47.7	11.8
24 Health and social care: accessibility and quality [b]	2.1	5.0	22.4	43.2	27.3
23 Home environment [b]	5.4	15.3	24.9	42.5	12.0
13 Opportunity for acquiring new information and skills [c]	3.5	14.7	36.9	30.5	14.5
14 Participation in and opportunity for recreation and leisure activities [c]	10.6	31.5	34.2	15.6	8.1
9 Physical environment (pollution, noise/traffic/climate) [b]	2.1	7.7	25.1	49.6	15.4
25 Transport [b]	.8	5.4	22.2	47.7	23.9
SD, standard deviation.					
1 = Not at all/very dissatisfied/very poor, 2 = a little/dissatisfied/poor, 3 = moderate/neither nor, 4 = very much/satisfied/good, 5 = completely/very satisfied/very good.					
[a] How much do you experience …					
[b] How satisfied are you with …					
[c] How well are you able to …					

Table A2 – Percentage distribution of Sub-Saharan African migrants in Germany socio-economic and sociodemographic characteristics.

		Percentage
Federal state of residence in Germany	Baden-Württemberg	9.3
	Bavaria	9.8
	Berlin	5.8
	Brandenburg	1.5
	Bremen	3.9
	Hamburg	17.2
	Hesse	6.8
	Mecklenburg-Western Pomerania	1.9
	Lower Saxony	6.2
	North Rhine-Westphalia	19.9
	Rhineland-Palatinate	4.4
	Saarland	2.3
	The Free State of Saxony	4.8
	Saxony-Anhalt	3.3
	Schleswig-Holstein	2.3
	The Free State of Thuringia	.6
Primary occupational group	I am not employed at the moment	3.5
	Armed forces occupation	.6
	Housewife/househusband	2.9
	Elementary occupations	27.8
	Plant and machine operators and assemblers	11.0
	Craft and related trade workers	5.2
	Skilled agricultural, forestry and fishery workers	5.4
	Service and sales workers	18.7
	Clerical support workers	10.0
	Technicians and associate professionals	9.3
	Professionals	4.6
	Managers	1.0
Approximate gross annual income	Less than € 10,000	38.4
	€ 10,000 to € 15,000	13.9
	€ 15,000 to € 20,000	19.9
	€ 20,000 to € 25,000	14.7
	€ 25,000 to € 35,000	12.7
	€ 35,000 to € 45,000	.4
Current residence status	Citizen	28.0
	Temporary residence	47.1
	Permanent residence	24.9