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Zentrum für psychosoziale Medizin, Institut für medizinische Psychologie

Direktor/in der Einrichtung
Prof. Dr. med. Dr. phil. Martin Härter
Stellv. Prof. Dr. phil. Monika Bullinger

Quality of life, subjective integration and social capital of Sub-Saharan African migrants in Germany

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Adekunle Moses Adedeji
aus Ile-Ife, Nigeria

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Prüfungsausschuss, der/die Vorsitzende: Prof. Dr Monika Bullinger

Prüfungsausschuss, zweite/r Gutachter/in: Prof. Dr Olaf von dem Knesebeck

Prüfungsausschuss, dritte/r Gutachter/in: Prof. Dr. Ulrike Ravens-Sieberer

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1 BACKGROUND

1.1 General Introduction

The adaptation and well-being of the growing number of Sub-Saharan African (SSA) migrants in Germany have until now mostly been subjects of speculation due to the unavailability of research from which informed conclusions could be drawn. This doctoral thesis presents empirical evidence on the subjective integration, socioeconomic performance, social capital and quality of life of SSA migrants in Germany.

Although there are debates on what specifically constitutes a good life, there remains a consensus that a good life includes a sense of satisfaction, fulfilment and belonging in one's social, political, economic, and cultural environment (Andrews & Withey, 1976; Diener, 2000; Frey & Stutzer, 2010; Hawthorne, Herrman, & Murphy, 2006). Over the last decade, professionals, politicians, and academics alike, have strived in various ways to tackle mounting issues surrounding better living with efforts mostly focused on specific issues (e.g.: public health, safety, inclusion, nutritional patterns, etc.). These efforts are hoped or expected to contribute in varying significance to individual's subjective life quality. In this thesis, quality of life is conceptualised as the summarised outcome of psychological, physical, biological, personal and social factors, their interactions, and their association to salient features of the environment as perceived by the individual (Bullinger, M. et al., 1995). The components underlying this summarised outcome may be perceived positively or negatively indicating a good or poor life.

Despite the increased efforts and recorded success in improving the overall quality of life (through advancement in research, technology and medicine), reports have shown different trends and gaps in the performance of this life measure based on specific demographic and socioeconomic features. Migrants population – characterised by lower socioeconomic status,

different cultural background and adaptation – continue to score poorly in various measures of life quality and other life indexes (Andrews & Withey, 1976; Brennan, Williams, Berk, & Pasco, 2013; Rueden et al., 2006) thereby emphasising the need for an in-depth scientific analysis of migration features that might impact on quality of life. Until recently, how migrants fare in a given country was habitually attributed to various defining socioeconomic characteristics. However, recent research suggested other migration associated factors such as migrants' origin, social integration, and social capital to be crucial for migrant well-being (Alvi, Zaidi, Ammar, & Culbert, 2012; Amit & Litwin, 2010; Bennet & Lindström, 2018; Dong & Chang, 2017; Pollack & von dem Knesebeck, 2004). Consequently, as more studies link the different migrant demographic, social and cultural features to their quality of life, it has become evident that the strength and direction of the associations vary. Depending not only on the conceptualisation and measures of the migrants' socioeconomic and demographic characteristics, but also on their individual histories and personal resources relevant for performance in the host country. It is therefore necessary to comprehensively investigate different migrant resources and features that may influence migrant quality of life.

The deteriorating socioeconomic conditions in the Sub-Saharan region of Africa and deepening poverty – fuelled by poor macro-economic adjustment measures and the continuous increase in the number of entrants into the labour market – have propelled a wide variety of migration configurations for this region. Generally, alongside their different cultural backgrounds, migrants from this region are often characterised by lower economic development and are significantly different in composition and usage of social capital (IOM, 2013a). Similarly, SSA migrants show unique settlement patterns and barriers (IOM, 2013b), experiences of systematic and racial discrimination (Schapendonk, 2012), and distinctive patterns and formation of social networks (Deng, 1997). These distinguishing characteristics are expected to produce a unique trend and pattern in the association, strength and direction of the linkage between

socioeconomic performance, social capital, subjective integration and quality of life for the SSA migrant group.

1.2 Sub-Saharan Africa

This region of Africa includes 49 sovereign countries south of the vast Sahara desert and comprises over 20,000 ethnic groups with varying culture and language (United Nations, Population Division, 2015). Apart from this defining geographical bound, Sub-Saharan Africa is characterised by its shared socio-cultural values that place family as the most basic and essential unit of the society and facilitates indigenous welfare practice (Patel, L, Perold, H, Mohamed, S. E, & Carapinha, R, 2007). Countries in this region of Africa are unified by their performance in socioeconomic and health indexes in international comparisons (World Bank, 2013). These, as well as other shared realities and elements – including physical features such as brown-black skin tone and woolly hair – shape the life experiences of SSA and enable holistic research and intervention projects among this group.

Sub-Saharan African (SSA) Migrants in Germany

The number of SSA migrants living in Germany has continued to rise progressively in the past few decades. While the registered population has almost tripled since 2009, an unprecedented increase of 25 per cent was reported between 2015 (269,616) and 2016 (339,287) (Destatis, 2017). It is important to emphasise that these numbers only represent SSA migrants registered in the German Foreign Authority Registry and exclude many SSA migrants' who are regarded “undocumented”.

Very little is known about the well-being, social characteristics, economic performance or how SSA migrants adjust to their new and different physical, social and political environment in Germany (Patel, Kaseke, & Midgley, 2012). This gap in knowledge is partly due to the attendant difficulty in accessing this group for research and their different social, cultural and

linguistic characteristics. However, studies from other European countries (e.g. the United Kingdom) suggest that SSA migrants group are disadvantaged in socio-economic performance, well-being and health (Ochieng, 2013). Similarly, other reports have found the SSA migrant group to be different in their settlement patterns and barriers in the host country (IOM, 2013b), the experience of systematic and racial discrimination (Schapendonk, 2012) and in unique patterns and formation of social networks (Deng, 1997). Also, Sub-Saharan Africa region-specific deficiencies are believed to have contributed to the poor performance of this migrant group (Ochieng, 2013).

Settlement patterns and barriers: While present-day boundaries of SSA countries remain a legacy of colonialism (Cohn, 2013), the effect of separating otherwise proximate political/cultural groups, or forcing traditional foes to live side by side, has created a disadvantaged region. Different in types and usage of its physical, economic, political, historical, cultural and social and welfare resources. As a mechanism for managing limited resources or tackling conflicts and poor socioeconomic state, many SSA communities adopt the indigenous welfare practices facilitated by cooperation and social support networks to provide for social needs and promote community well-being. After arriving in Germany – with mostly non-transferable training or qualifications, inadequate or no knowledge of the German language, different background and understanding of social resources and structure – many SSA migrants are faced with the unique challenge of settling down in their new social, political, cultural and economic environment (IOM, 2013b). Understanding and adapting to the new institutions and social structure where indigenous welfare practices are largely ignored poses a severe challenge for many SSA migrants.

Victims of systematic and racial discrimination: Recent images of SSA migrants arriving exhausted in dilapidated boats, or hidden in fully packed cargo trucks have reinforced a

negative public perception of SSA migrants as “desperate invaders” or “poor victims of the ramping humanitarian crisis” among German natives and other migrant groups (Schapendonk, 2012). This perception of SSA migrants is often in tandem with racial attacks, labour exploitation, and discrimination in their jobs. A recent report from the UN Fact-Finding Mission described racism against Africans in Germany as "systematic" and revealed how African men do not go to certain areas for fear of being attacked (United Nations Human Rights, 2017). These exclusions facilitate stronger economic, social, mental and psychological disadvantages for many SSA migrants in Germany.

Groups and network formation along the ethnic and linguistic line: With over 3000 distinct ethnic groups and over 2000 languages, SSA is home to the most genetically and culturally diverse people on Earth (Kahn, 1994). Due to the lack of universal primary means of integrating this group from over various cultural background, many SSA migrants in Germany fall back to their traditional society formation system where family, lineage, clan, tribe, and ultimately a confederation of groups with ethnic, cultural, and common linguistic characteristics, form basic units of social, economic, and inter-communal relations (Deng, 1997). Different from other migrant groups, SSA migrants’ strong ethnic alliance usually produces smaller multiple groups in the form of friendships, networks, or formal associations which are often closed and attract little or no attention from the outside.

1.3 Conceptual Definitions

1.4.1 Quality of life

In this thesis, quality of life is conceptualised as a measure of the expression of the overall sense of life that includes aspects of health, environment, social relationships and addresses the diversity and multiculturalism that characterise today’s society (Bullinger, M. et al., 1995). It is defined as “individual's perception of their position in life in the context of the culture and

value systems in which they live and in association with their goals, expectations, standards, and concerns" (WHO, 1996).

While quality of life has gained attention as both objective and subjective measures of life performance, there are still obstinate challenges in developing a uniform understanding of quality of life measures. These challenges are emphasised by the many different conceptualisation that focuses on specific aspects of life under several broad categories. They include individualised measures that allow the inclusion of aspects of life considered to be important for individuals or patients. Generic and disease-specific measures are designed to evaluate quality of life in specific conditions.

This thesis assesses the quality of life of SSA migrants in Germany with a multi-dimensional purview that incorporates the individual's perception of health status, the impact of disease and impairment on daily activities and behaviour, and perceived functional status embedded in cultural, social and environmental contexts. This multi-dimensional conceptualisation of quality of life is believed to reinforce the importance of humanistic, social, and environmental elements for overall life quality and challenge the increasingly mechanistic measures that focus only on the eradication of disease and symptoms.

1.4.2 Subjective Integration

Rather than assessing integration as a measure of socio-cultural adaptation or socioeconomic gain or loss, this thesis focuses on SSA migrants' perceived acceptance, inclusion and performance in various aspects of German society. Subjective integration is referred to as the cognitive ratings of individuals' perceived recognition and acceptance in their host community (Miroslav Macura, Alphonse L. MacDonald, & Werner Haug, 2005). While migrants' integration has often been measured in the context of their adaptation to the host's values, for example, language, culture and social norms (Anna Di Bartolomeo, Sona Kalantaryan, & Sara

Bonfanti, 2015; Marco Caselli, 2015), understanding migrants perception of migration has been shown to provide insight into their social relationships with and within the community, as well as providing insight into immigrants activities and interaction with social environment (Ertel Karen A., M. Maria Glymour, & Lisa F. Berkman, 2009; Seeman Teresa E., 1996).

1.4.3 Social Capital

Social capital is defined as resources inherent in social relations that facilitate collective action. These resources include trust, norms and networks of association. Research has shown that these resources are multifaceted and differ between migrants and the native population in terms of their usage, composition, and effect on individual behaviour and well-being (Maritsa Poros, 2011). This thesis takes a pluralistic approach to the conceptualisation of social capital and draws on the Normal Uphoff (1999) dimensions of social capital (i.e. structural and cognitive social capital) as a framework for categorising SSA migrants' indicators of social capital. It further investigates how these dimensions are associated with other aspects of life.

Structural Social Capital (SSC): The structural component of social capital presents the sum of the actual and potential social resources embedded within, available through, and derived from, the network of relationships possessed by an individual or social unit (Nahapiet & Ghoshal, 1997). In other words, SSC represents the network structure of people's interactions. These interactions for SSA migrants include the creation and termination of social relationships formed – before, during and after migration – across and within the different ethnic groups. It also includes the overall structure of the networks that are formed through these interactions.

Cognitive Social Capital (CSC): Different from the SSC, cognitive social capital is characterised by intangibility as it refers to the development of cognitive elements of social connections that allow communication and interactions to occur between actors through shared meaning, representations and interpretations. These social resources measured through norms

of trust are vital for all forms of human capital and might be useful for facilitating SSA migrants' inclusion in German societies. Through trust, this dimension of social capital is believed to support the formation and maintenance of social relations that prop up the reduction of inequalities, create a mutual ground for dialogue, and ultimately improve overall well-being (Mularska-Kucharek, 2015).

1.4 Problem statement

The poor socio-economic performance and lagging stand in the quality of life for SSA migrants have for long raised concern among humanitarian workers and public health professionals. As the SSA migrant population in Germany continues to rise, the unique experiences of migration among this group have further intensified the need to understand their quality of life and identify the necessary mechanisms for the development of holistic health promotion and intervention programs.

Keeping in mind the group's unique features, facilitating better life outcome for this group will require adaptation of a new approach that considers the different population characteristics, and incorporates knowledge of the quality of life performance and predictors in Germany. However, the poor access to this group has stalled attempts to garner this fundamental knowledge. The consequence of this insufficiency is made evident by the failure of projects targeted at improving the socioeconomic status, reducing gaps in health and improving quality of life for SSA migrant groups in Germany.

1.5 Research Objectives

The general goal of this doctoral research is to evaluate the quality of life of SSA migrants in Germany and to investigate how their subjective integration and social capital predict this quality of life outcome.

The following specific objectives were set to achieve the general goal:

1. To develop and apply a method for capturing a sample of SSA migrants that reflects population characteristics for health and social research: the “5-wave-approach”.
2. To evaluate SSA migrants’ living situation in Germany and their socioeconomic status.
3. To examine the association between SSA migrants’ quality of life domains and
    a. socioeconomic performance and demographic characteristics,
    b. subjective integration, and
    c. social capital.
4. To test the effect of gender and German language competence on the structural link between the dimensions of social capital and quality of life outcome.

2 METHOD

2.1 Study Design, Population, and Data Collection

Data on SSA migrants' quality of life, subjective integration, social capital and socioeconomic and demographic characteristics were collected in a cross-sectional survey across the 16 German federal states. Participants in this survey include SSA migrants

a) from one of the 49 sub-Saharan countries currently residing in Germany,
b) that hold a formal residence status in Germany (i.e., German citizenship or citizen of any other European Union (EU) state or permanent or temporary residence status in Germany),
c) that are 18 years or older
d) that live in one of the 16 German federal states.

Data were collected between January 2017 and November 2017. Close to 3,000 potential participants clicked on the online survey links or were invited to fill out the paper and pencil survey questionnaire in English, French or German with over 80% declining the invitation or abandoning the survey. From the 532 total participants, 373 completed the online questionnaire, 95 filled out the paper and pencil survey while the questionnaire was administered to the remaining 64 one-on-one or via telephone interview.

The sample in this survey was reached using a 5-wave-approach that breaks down the Sudman & Kalton discriminative referral system into five separate components, and these are: community leaders, community outreach, chain referrer, systematic multiplication, and natural multiplication.

2.1.1 Data collection: The 5-wave-approach

Collecting data from a representative sample of SSA migrants in Germany required the elaboration of Sudman & Kalton (1986) exponential discriminative snowball sampling technique into an approach that addresses the SSA migrants' distinguishing characteristics while easing the access to this group. Sudman & Kalton non-probability (non-random) sampling method developed in 1986 has for years proven to be useful in collecting data when the population possesses characteristics that are rare or difficult to access (Kalton, 2001).
The method involving primary data sources nominating other potential primary data sources and relies on single or multiple registers of persons in certain key positions to construct wide-ranging sample frames that are hoped to reflect population characteristics (Sudman & Kalton, 1986). However, since the quality of the resultant sample depends on the comprehensiveness of the sample frame, the absence of such essential population register poses a significant challenge for the adaptation of this method among SSA migrants in Germany. Consequently, the Sudman & Kalton sampling method does not guarantee representativeness of the sample and is biased towards those with many contacts with other members of the population. Keeping in mind SSA migrants' different group and network formation patterns, the application of Sudman & Kalton discriminative snowball sampling technique will most likely yield a non-representative and biased sample for SSA migrants in Germany.

The 5-wave-approach was thus developed to attempt to address this non-representativeness in the Sudman and Kalton snowballing sampling technique by breaking down the discriminative referral system into separate components that systematically increase the probability of selection for all members of the population.

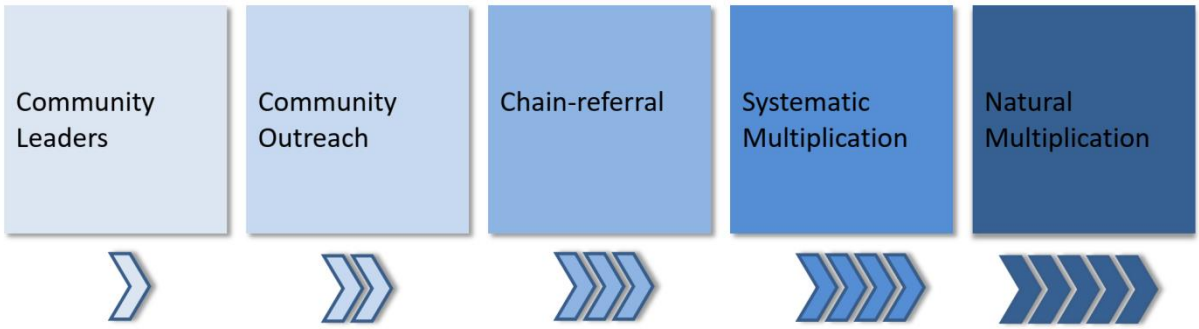

Figure 1: The 5-Wave-approach for accessing SSA migrant population in Germany

As shown in Figure 1 above, data collection was divided into five stages, that is: community leaders, community outreach, chain referral, systematic multiplication, and natural multiplication. These stages are sequential to emphasise the order in which each wave was implemented.

Wave 1: Community Leader

At this initial stage, community and group leaders from different organisations, groups and networks were invited to participate in the survey. Emails and telephone invitations were sent to leaders of African communities such as students and professional associations in Germany, ethnic and tribal group leaders. non-governmental organisations, Africa Christian council, imams and pastors. The community leaders were extensively briefed on the aims, benefits and importance of the study and thereafter invited to participate in the survey.

Wave 2: Community Outreach

Community members who met the inclusion criteria were subsequently invited to participate in the survey. After the initial contact with various group leaders, some of the group members were already aware of the project and were willing to participate. Open invitations were sent to members of Africans social media groups on Facebook and WhatsApp. Links to the online survey, barcode, and paper questionnaire in English, French, and German were also made

available to group members. Telephone or one or one interview was offered as an alternative for those who were unable to read any of the three languages.

Wave 3: Chain referral

Initial participants from wave one and two were then asked to nominate - through their social and professional networks - participants who meet the eligibility criteria and can potentially contribute to the study. The nominees who responded or participated were again asked to suggest potential participants from among their acquaintances.

Wave 4: Systematic Multiplication

At this stage, paper questionnaire, barcode, and links to the online survey were distributed in different Afro shops and beauty salons around Hamburg, Nordrhein-Westfalen, Bremen, and Berlin and posted or shared in neighbourhoods with high African migrant residence. The same was done at SSA migrants' countries missions to Germany (embassy or consulate) as well as in well-known African medical practitioners' offices. This systematic approach was targeted at those who might not have a social connection with African organisations or might have been excluded from previous waves.

Wave 5: Natural Multiplication

The final wave of the 5-wave approach involves observation without interferences from the principal researcher. At this point, no further promotional activities were carried out for the survey. The online platforms were left open and monitored as potential participants visited or completed the online questionnaire.

2.1.1.1 Data Comparison

In order to evaluate the implication of the 5-waves- approach, data collected on participants' socio-demographic characteristics (i.e., age, gender, state of residence in Germany, country of origin) "Social Capital and Quality of Life survey (SCQOLS) – 2017" was compared with data

from Germany foreign population report 2016 (AuslaendBevoelkerung 2016) (Statistisches Bundesamt (Destatis), 2017) to check the representativeness of the sample and the validity of the approach.

The *Germany foreign population report (GFPR) 2016 (AuslaendBevoelkerung 2016)* compiled on the 31st day of December of each year by the Federal Statistical Office is based on the Foreigner Central Register (Ausländerzentralregisters AZR). It contains cumulative immigrants' population reported by nationality, gender, residency status, length of current stay, age, and marital status. From 1995 the evaluation takes place according to the Act on the Central Register of Foreigners (AZR law) (Statistisches Bundesamt (Destatis), 2017). This report remains the only known credible register where demographic data of SSA migrants in Germany is recorded and allows for comparison with other data sources.

2.2 Measures

2.2.1 Quality of life - WHOQOL-BREF

Quality of life was measured using the Bref version of the World Health Organisation quality of life measure (WHOQOL-BREF). The 24 core items are organised into four domains: Physical health (7 items), Psychological health (6 items), Social Relationships (3 items) and Environment (8 items). Following the WHOQOL user manual, domain scores were calculated and scaled in a positive direction. These scores were computed to denote individual's perception of the quality of life in each particular domain by adding up all item scores within each domain with the raw score then transformed using a standardised 0–100 scale score (i.e., higher scores denote the higher quality of life) (WHOQOL, 1998).

2.2.2 Aggregate Quality of life - EUROHIS-QOL

Sample aggregate Quality of life was measured by the EUROHIS-QOL 8-item Index (Schmidt, Mühlan, & Power, 2006). This self-report questionnaire is derived from the World Health

Organization Quality of Life Assessment (WHOQOL-100 and WHOQOL-Bref instruments) and includes eight items representing the physical, psychological, social, and environmental domains of QoL. The eight items were scored on a 5-point Likert scale ranging from "not at all" to "completely". An overall QoL score was computed from the mean score of the items, with higher scores indicating better QoL. In the current sample, the questionnaire presented good reliability, with a Cronbach's alpha value of .83.

2.2.3 Subjective Integration

Participants' subjective integration score was generated from five items that measure:

Item 1: SSA migrants' satisfaction with life in Germany;

Item 2: Satisfaction with career situation;

Item 3: Satisfaction with income;

Item 4: Likelihood of recommending others to come to Germany;

Item 5: Feeling welcome in Germany.

On a 5-point Likert scale, participants were asked to rate to what extent, each of the five items applies to aspects of their lives in Germany with 1 meaning: "I do not agree at all" and 5 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 quality of life scores.

*Compute: 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-points 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 scores from 82 through 100 as very high. These questions with their corresponding answer option 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 (BAMF - Bundesamt für Migration und Flüchtlinge, 2005).

2.2.4 Social Capital

Social capital was measured using the World Bank social capital scale (Christiaan Grootaert & Thierry Van Bastelar, 2002). A latent structural social capital (SSC) variable was formed from two variables, i.e., groups and networks density, and groups and networks diversity (Zheng, 2010). Data on network and group density were collected by asking the respondents how many groups or networks they belonged to. The responses were then grouped into six categories (0 = zero membership; 1 = one membership; 2 = two membership; 3 = three membership 4 = four or five memberships; 5 = six and above). Group and network diversity was measured by asking if members of groups or networks are mostly of the same religion, gender, ethnicity, race or linguistic background, occupation, and education. One point was awarded for every "NO" and zero for every "YES". A diversity score ranging from zero to five, was then computed.

Cognitive social capital was observed through localised trust and centralised trust. Localised trust was measured by asking the respondents how much they trust local representative on a 5-point Likert scale ranging from "not at all" to "a very great extent". Similarly, participants were asked how much they trust the central government official using the same scale to generate centralised trust.

2.2.5 Socio-demographic and economic indicators

A thorough literature review was conducted to facilitate the selection of the explanatory variables that are theoretically relevant for the outcome measures. The following variables were

included in this study: age; gender, marital status, primary occupation, income, language competences, residency status, length of stay in Germany, educational accomplishment, region of origin, and state of residence in Germany.

Age was measured as a continuous variable with participants requested to enter their age as of the last birthday. Similarly, data on gender were collected by choosing between "male", "female" or "others". Marital status, on the other hand, was categorised into six categories, i.e., single, married, widowed, divorced, married but separated or in partnership but not married. Participants were required to select the appropriate status from the six options. The reported primary occupation was ranked on a 12-point scale based on career level, i.e. from "Managers: to "unemployed" and follow-up question on the current job situation (part-time, full-time) and occupational level with educational attainment were asked to form a more comprehensive understanding of the primary occupation situation. Income was measured by asking respondents their approximate gross annual income (before statutory deductions) with options from "Under 10000 Euro" to "50,000 and above". This ranking was adopted from a similar study assessing migrants socioeconomic status in Germany (BAMF - Bundesamt für Migration und Flüchtlinge, 2005).

German, English and French language competence were measured by asking the participants to rate their language skill on a 6-point scale ranging from "Native" to "not at all". Information on German language usage at home, at work or with friends as well as the level of required written and spoken German competence for current occupation was also collected. Residence status was categorised into citizenship, permanent residence and temporary residence (for students and professional). Similarly, length of stay in Germany was categorised into "Less than one year", "1 to 3 years", "3 to 5 years", "5 to 10 years", and "more than ten years". Respondents were required to categorise their highest educational qualification into "No formal

education", "Certificate of secondary education or elementary school certificate", "Vocational school certificate", "Degree from a university/university of applied sciences", "Masters degree", "Technician or equivalent certificate", "Doctorate or postdoctoral lecturing qualification", and "Other". Region of origin was computed by collapsing information on country of origin into regions, that is: "East Africa", "West Africa", "Central Africa" and" Southern Africa". This approach was adopted to enable a comparison with data from the Germany Foreign Population Report. Finally, respondents were required to select their state of residence from the sixteen federal states in Germany.

2.3 Data Analysis

Data on participants' socio-demographic characteristics (i.e., age, gender, state of residence in Germany, country of origin) from the survey: "Social Capital and Quality of Life survey (SCQOLS) – 2017" were compared with data from Germany Foreign Population Report (GFPR) 2016 (AuslaendBevoelkerung 2016) (Statistisches Bundesamt (Destatis), 2017) to check the representativeness of the sample and the validity of the 5-wave-approach.

Generally, WHOQOL-BREF domain scores were treated as continuous numerical variables (on a scale of 0–100). To better understand SSA migrants' quality of life score, we refer to Hawthorne, Herrman, & Murphy (2006) Norm population as a basis for score comparison and interpretation. This study; Hawthorne, Herrman, & Murphy, (2006), provides preliminary population norms for interpreting the WHOQOL score in the 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 (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 demographic characteristics and the quality of life domains. Following the overwhelming evidence on the role of gender on quality of life performance among other population groups (Bielderman et al., 2015; Brennan et al., 2013; Kaczmarek et al., 2017), a gender-specific correlation was computed for the quality of life domains and other socioeconomic and demographic variables. Multiple linear regression analyses were performed to evaluate the association between the dependent variables; quality of life domain scores and independent variables; subjective integration, age, gender, and education.

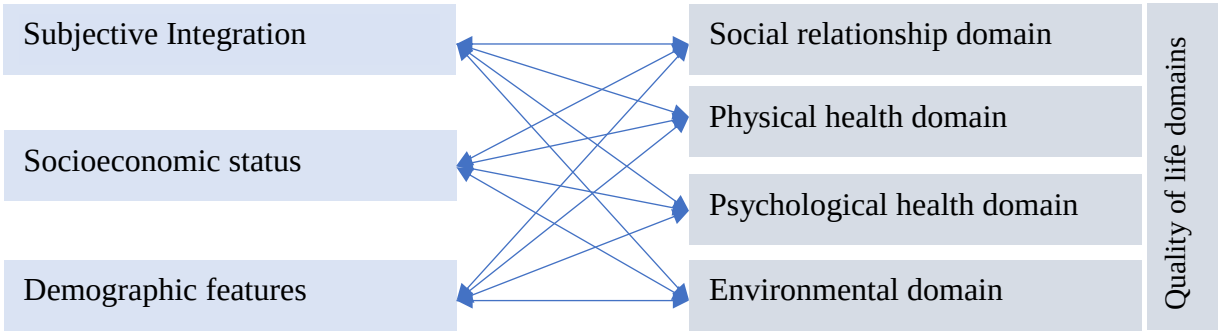

Figure 2: Regression model for quality of life domain scores, subjective integration, socioeconomic status and demographic features.

Similarly, Structural Equation Modelling was performed with Analysis of Moment Structures (AMOS Development Corporation, Meadville, PA). The method of estimation was the maximum likelihood, and the overall model fit was evaluated based on the chi-square statistic ($\chi 2$) and on the main approximate goodness-of-fit indexes namely: the comparative fit index (CFI), the root mean square error of approximation (RMSEA) and the standardized root mean squared residual (SRMR). A model was considered to have a good fit when $\chi 2$ was non-significant ($p > 0.05$) or $\chi 2/df < 5$, the CFI ≥ 0.95, the RMSEA ≤ 0.06 ($p > 0.05$) and the SRMR ≤ 0.08; an acceptable fit was defined by a CFI ≥ 0.90 and a RMSEA ≤ 0.10 (Browne, M., &

Cudeck, R, 1993; Hu & Bentler, 1999). To ensure the pertinence of multidimensional constructs (latent variables), we first examined the measurement model testing the hypothesised links between the latent variables and their observed indicators. The construct reliability of the latent variables was assessed using composite reliability values calculated from the squared sum of the standardised factor loading divided by the squared sum of the standardised factor loading and the error variance terms; good construct reliability was established if the composite reliability value was higher than .70 (Hair, Black, Babin, & Anderson, 2009). Next, we examined the structural model testing the direct effects of CSC and SSC on QoL.

Finally, to ascertain that the parameters tested in the model were valid for different groups, namely gender (0 = male vs 1 = female) and German language skills (0 = "not at all to average" vs 1 =" well to native"), we examined the baseline model for each group separately, and we subsequently conducted multi-group analyses testing the model's invariance between the groups. As suggested by Little (2013), we first tested the invariance on the associations between the latent variables and their observed indicators. Once the measurement invariance was established, we examined the structural invariance, i.e. the invariance on the strength of the associations among the latent variables. The chi-square difference ($\Delta\chi 2$) method was used to compare the unconstrained model with the models in which the measurement weights and the structural weights were fixed to be equal across groups (Byrne, 2010). The observation of no significant differences between the unconstrained model and the model of the structural weight is indicative of the model's overall validity for the different groups under examination.

3 RESULTS

3.1 SSA migrants' demographic distribution

Data from SSA migrants (N=518) were analysed in this thesis. The result shows that participants' age ranges between 19 and 56 years with an average age of 32.5 years (SD 7.93). Majority of the study participants were male, with females accounting for about two-fifths of the sample in this study. About one-third reported being married, while a little above 60 per cent reported being single or in an unmarried partnership (See Table 1).

Table 1: Socioeconomic and demographic characteristics of Sub-Saharan African migrants in Germany (SCQOL 2017) (N=518)

Percentage of female		38.9
Average age		32.5 Years
		Percentage
Marital Status	Single	32.9
	Married	34.3
	Widowed	0.5
	Divorced	1.6
	In partnership but not married	30.8

As presented in Figure 3 below, analysis of data on the region of origin shows half of the study participant migrated from West Africa (including Ghana, Nigeria, Togo, Ivory Coast, Liberia, Burkina Faso, Cape Verde, Gambia). A little over one-fourth came from East Africa (including Tanzania, Kenya, Uganda, Rwanda, Eritrea, Ethiopia) compared to 18 per cent from central Africa (including Angola, Cameroon , the Democratic Republic of the Congo, Republic of the Congo, Gabon, Rwanda, South Sudan) and a little less than 5% from the southern region of Africa (including Botswana, Namibia, South Africa).

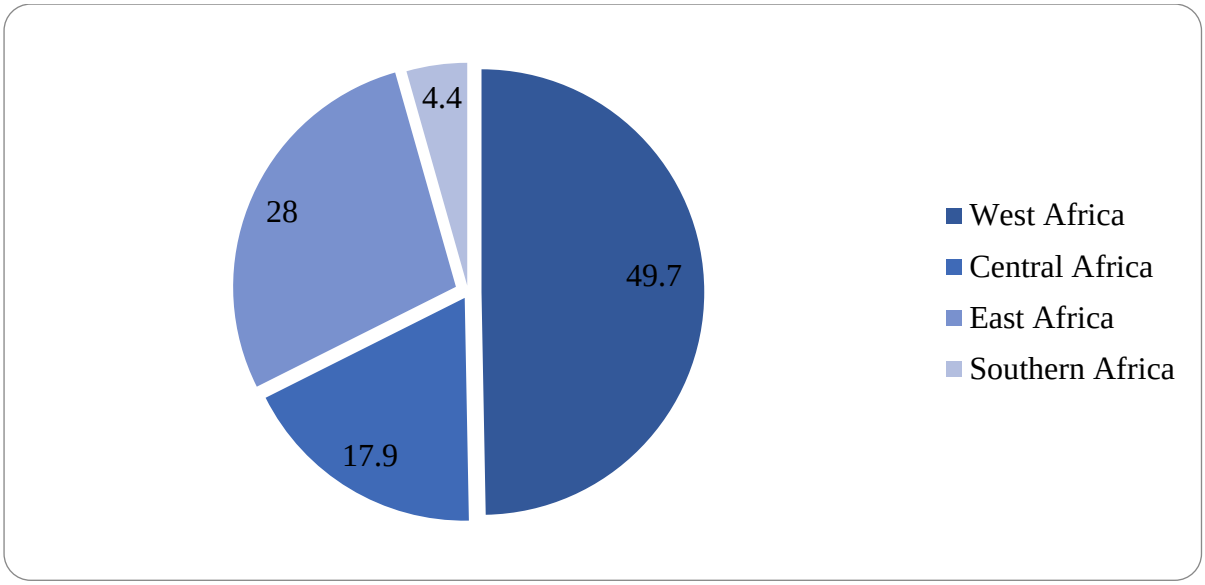

Figure 3: Percentage distribution of Sub-Saharan African migrants in Germany by region of origin

Sample distribution, according to the federal state of residence in Germany, shows that close to 20 per cent and about 17 per cent of SSA migrants' sample in the study live in North Rhine-Westphalia and Hamburg respectively. On the other hand, less than one per cent reported living in Thuringia, making it the least represented federal state in the reported study. Similarly, Brandenburg and Mecklenburg-Vorpommern represented only 1.5 and 1.9 per cent of the sample population respectively.

While the two southern-most states; Baden-Württemberg and Bavaria together represent 19 per cent of the sample, Berlin, Saxony, Saxony-Anhalt, Brandenburg, Thuringia, Mecklenburg-Vorpommern represented an accumulated 18 per cent. As presented in Figure 4 below, the region consisting of North Rhine-Westphalia, Hesse, Saarland and Rhineland-Palatinate represents over 33 per cent of the total sample size. Similarly, Schleswig-Holstein, Bremen, Hamburg and Lower-Saxony accounted for 30 per cent.

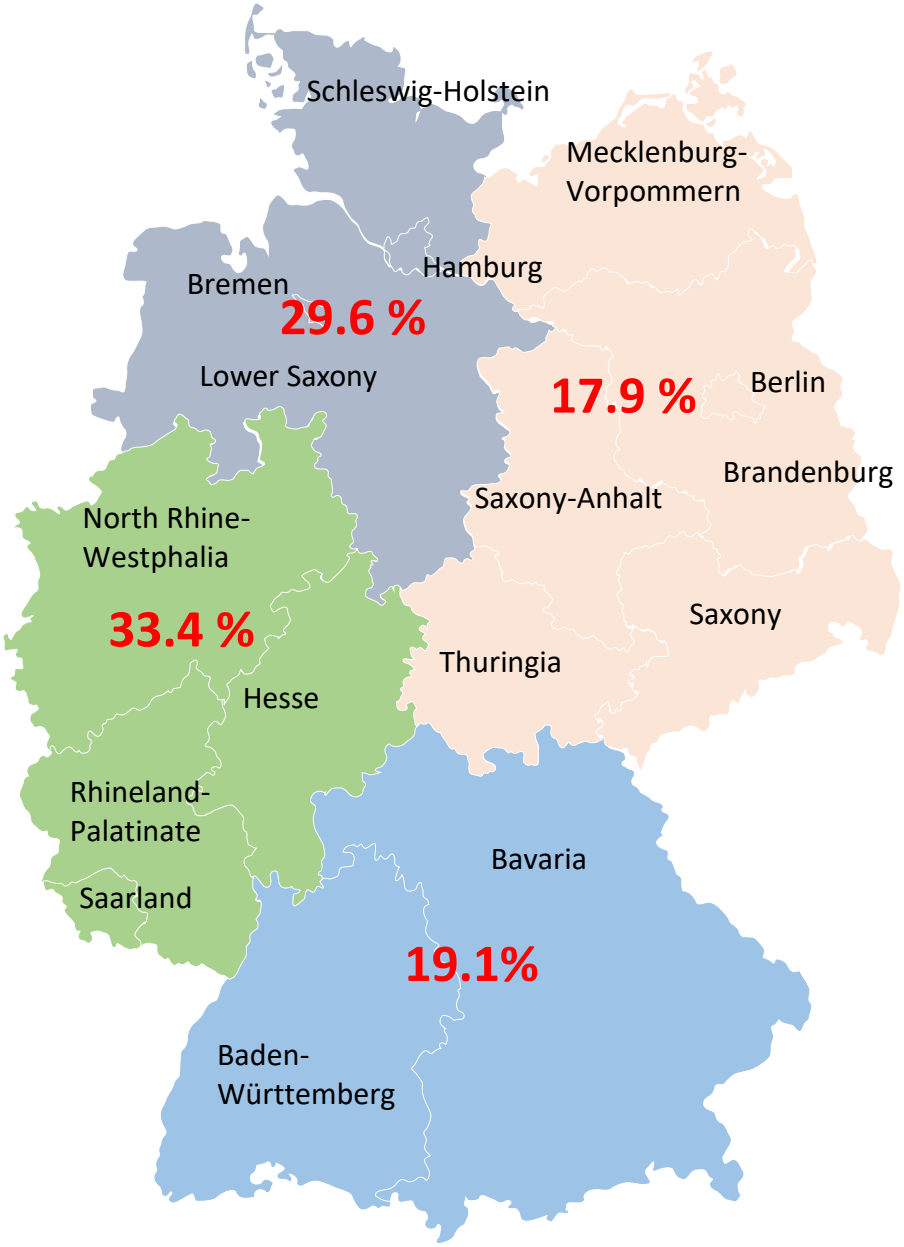

Figure 4: SSA migrant sample percentage distribution by region of residence in Germany

3.2 The sample representativeness – the 5-wave-Approach

As presented in Figure 5 below, the sample in this study was reached following the five-wave approach. At the end of the first wave involving a visit to community leaders, data from 84 participants were recorded in the sample. The number of participants almost tripled after the second wave (community outreach) with another 158 participants added at wave three. The data shows that only moderate increases were reported after wave 4 and five respectively,

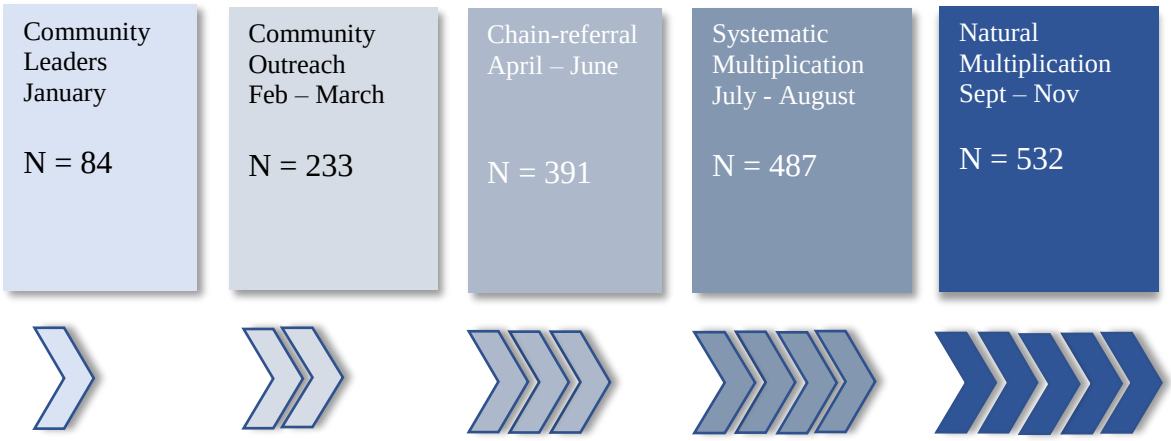

Figure 5: The 5-Wave approach with results and timeline

While over 5000 potential participants clicked on the online survey link or were invited to participate in the study via email or telephone, only 532 completed the survey questionnaire. Close to 70 per cent of this number filled the survey questionnaire via the online platform, 18 per cent filled out the paper and pencil questionnaire while the remaining 12 per cent had the questionnaire administered to them one-on-one or via telephone interview.

After initial data check, SPSS Missing Value Analysis showed minimal missing data pattern. The online questionnaire setup-where almost all questions were marked mandatory-is believed to have facilitated the completeness of data in this study. Nevertheless, 14 cases with excessive missing data and data inconsistency were removed. Furthermore, multiple data imputation was computed to replace data missing at random (MAR). This method has been shown to produce valid statistical inference and reflects the uncertainty associated with the estimation of the missing data (Kang, 2013).

To check the representativeness of the sample and the validity of the 5-wave-approach, data on participants' socio-demographic characteristics (i.e., age, gender, state of residence in Germany, country of origin) from the "Social Capital and Quality of Life survey (SCQOLS) – 2017" were compared with data from Germany Foreign Population Report (GFPR) 2016

(AuslaendBevoelkerung 2016) (Statistisches Bundesamt (Destatis), 2017). These comparisons reveal substantial similarities between both data. The similarities were highlighted by data on gender, the average age in years, marital status, and region of origin

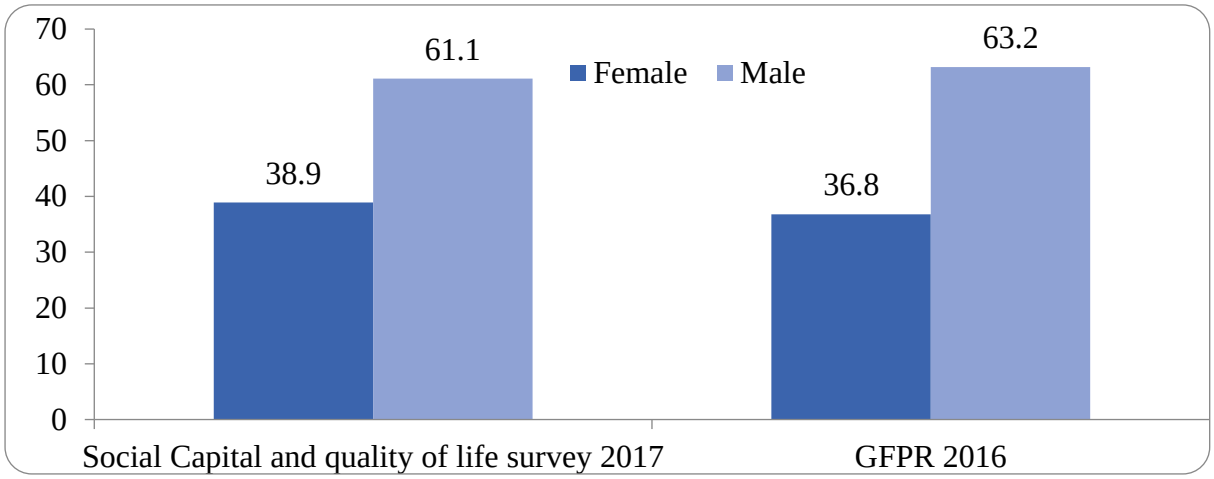

Figure 6: Participant/population percentage distribution by gender for SCQOLS and GFPR respectively

Data comparison on gender distribution from both datasets shows a male majority with 38.9 per cent female participants in SCQOL survey and 36.8 per cent in the Germany foreign population report (GFPR) respectively (see Figure 6). As presented in Table 2 below, data on age shows a very similar average age for both SCQOL survey (32.5 years) and GFPR 2016 (30.3 years). Both datasets project a relatively young SSA migrants' population in Germany.

Data on marital status for SCQOL survey participants' shows that about 34 per cent are married while 33 per cent are single, and 31 per cent are in partnership but not married. That is, about one-third of study participants are in a formal matrimonial union, while more than half (63.7 per cent) remain unmarried, and the remaining (2 per cent) are either divorced or widowed. Similar trends were reported in the data from GFPR, where about 24 per cent of SSA migrants in Germany are married, and a clear majority (59.15) reported to be single. The remaining 17 per cent reported divorced (4.5 per cent), widowed (1 per cent) or unknown marital status (11.6

per cent). A first look at these data suggests less similar trends; however, categorising the data into married and unmarried reinforce the similarity in the marital status distribution in both datasets. The unmarried majority (SCQOL: 63.7, GFPR: 59.3), married (SCQOL: 34.3, GFPR: 23.77).

Table 2: Comparison of German Foreign Population Register (AuslaendBevoelkerung) 2016 and Social Capital and quality of life survey 2017 by Sex ratio, Average age, and Family status

		SCQOLS 2017 (n = 518)	AuslaendBevoelkerung (GFPR)2016
Average age		32.5 Years	30.3 Years
		Percentage	Percentage
Family Status	Single	32.9	59.15
	Married	34.3	23.77
	Widowed	0.5	0.89
	Divorced	1.6	4.48
	In partnership but not married	30.8	0.15
	Partner diseased	-	0.001
	Partnership dissolved	-	0.01
	Unknown marital status	-	11.56
Region of Origin	West Africa	49.7	44.22
	Central Africa	17.9	12.34
	East Africa	28.0	38.80
	Southern Africa	4.4	4.75

Data on the region of origin shows a similar trend in the distribution for SCQOLS 2017 and German foreign population register (GFPR, 2016). Both datasets, reported close to half of SSA migrants in Germany migrated from the Western region of Africa. Similarly, East Africa was

acknowledged as the second most popular SSA migrant origin, followed by Central Africa and Southern Africa, respectively.

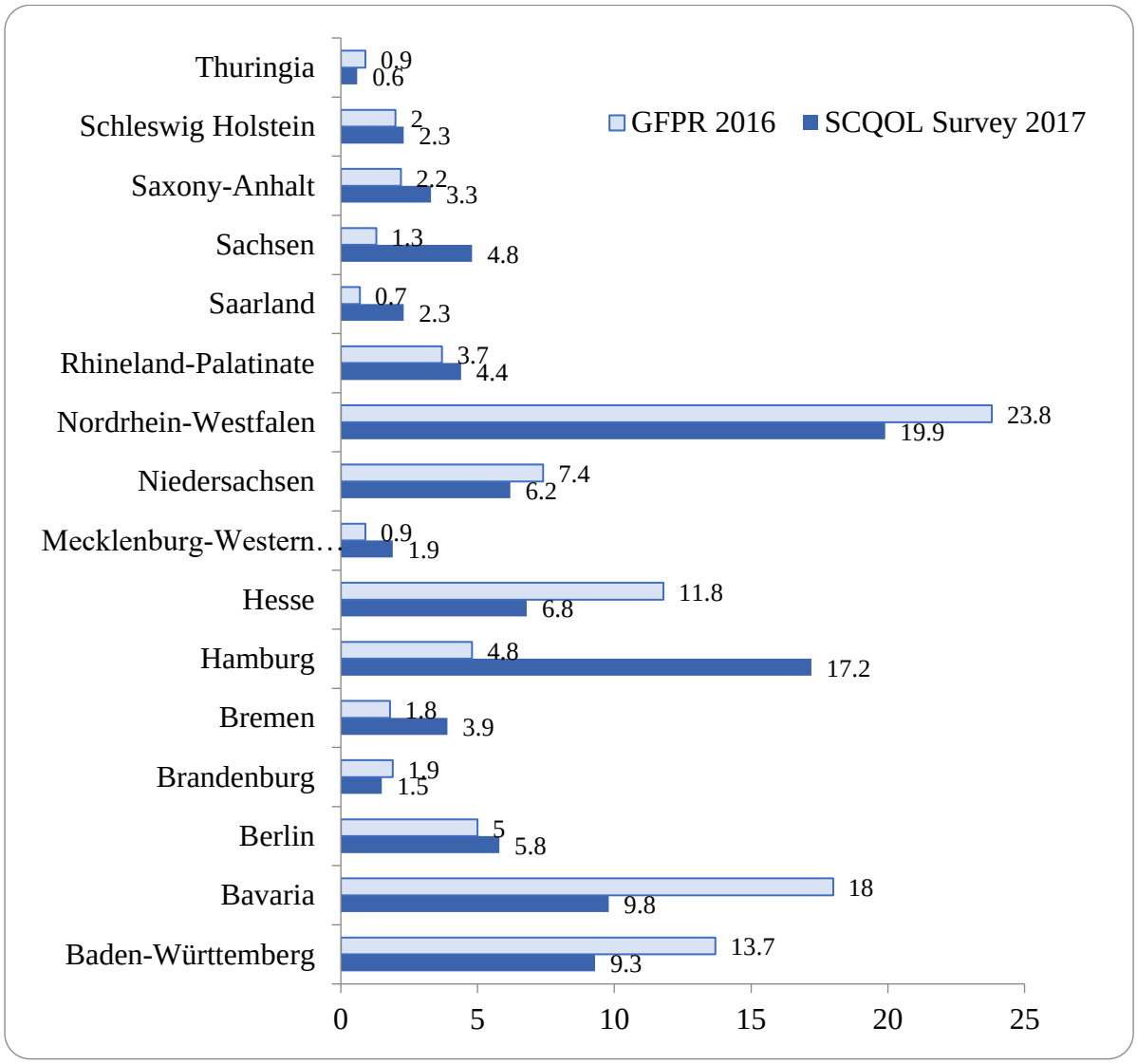

Figure 7: Sub-Saharan African migrants' percentage distribution by the federal state of residence in Germany for social capital and quality of life (SCQOL) survey and Germany foreign population report GFPR 2016

Data from the GFPR shows that close to one-fourth of SSA migrants in Germany live in Nordrhein-Westfalen, making it the federal state with the highest population of SSA migrants. In the same vein, data from SCQOL survey shows this region as the most represented in the sample with one-fifth of total sample size. Thuringia was reported to have the lowest population of SSA and was least represented in the sample size. While similar trends were reported in

most states, the distribution in individual states stands out in their dissimilarity. Although only about five per cent of SSA migrants' live in Hamburg according to GFPR, over 17 per cent of the sample in SCQOL survey came from this state. Similarly, Hessen and Bavaria reported different figures in the GFPR reported figures and the proportion in SCQOL survey sample (see Figure 7 above).

3.3 Sub-Saharan African migrant socioeconomic status distribution

An analysis of data on education presented in Figure 8 below shows that half of SSA migrant had completed at least a university degree. Also, one third reported having completed vocational training that enables them work as technicians or as traders or craftsmen. While 17 per cent reported having completed some form or formal primary to secondary educational training, only about one per cent recorded no formal educational training.

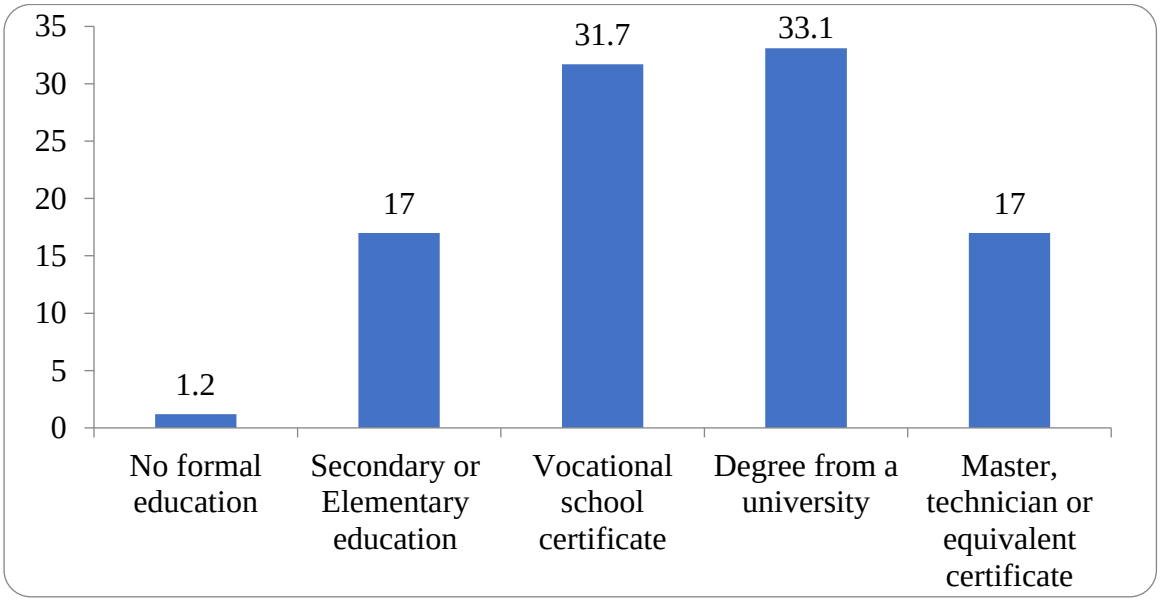

Figure 8: Percentage distribution for educational attainment for Sub-Saharan African migrants in Germany

Data on primary occupation shows two in every five SSA migrant work elementary jobs (for example cleaning) or as machine operators in warehouse or industry. About 15 per cent work as technical associates, professionals or managers. Close to 30 per cent reported clerical support, or sales and service jobs as their primary occupation while 3.5 per cent reported being unemployed (see Figure 9).

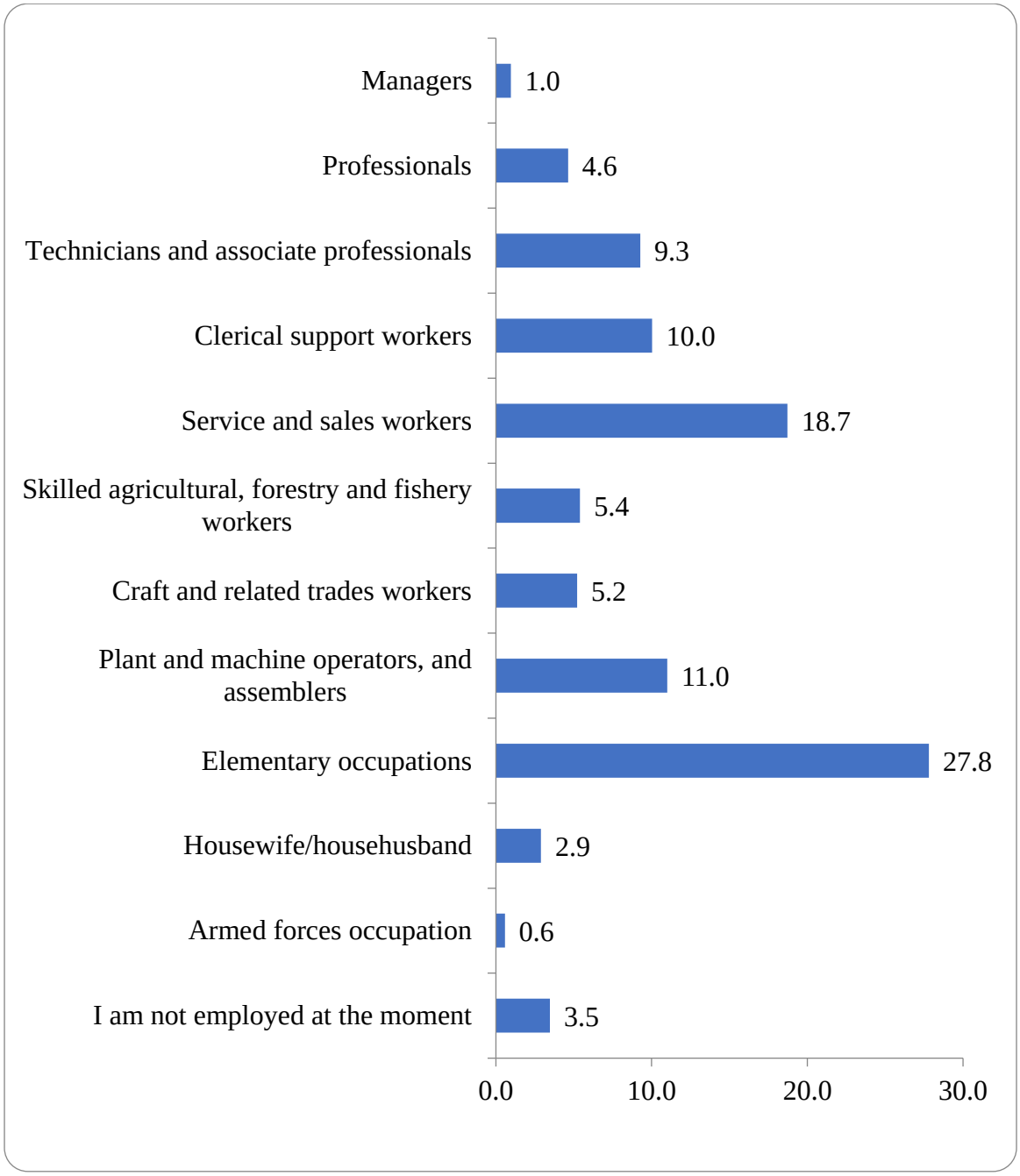

Figure 9: Percentage distribution Sub-Saharan African migrants in Germany primary occupation

Further investigation into the current primary occupation situation reveals that close to half of the population are occupied in paid part-time jobs (up to twenty hours a week), while less than twenty per cent are employed in full-time jobs (40 hours per week). 8 per cent reported being retired or caring for children, other dependants or being unemployed. The remaining 26 per cent reported being employed in part-time jobs for more than twenty hours but less than 40 hours per week (see Figure 10).

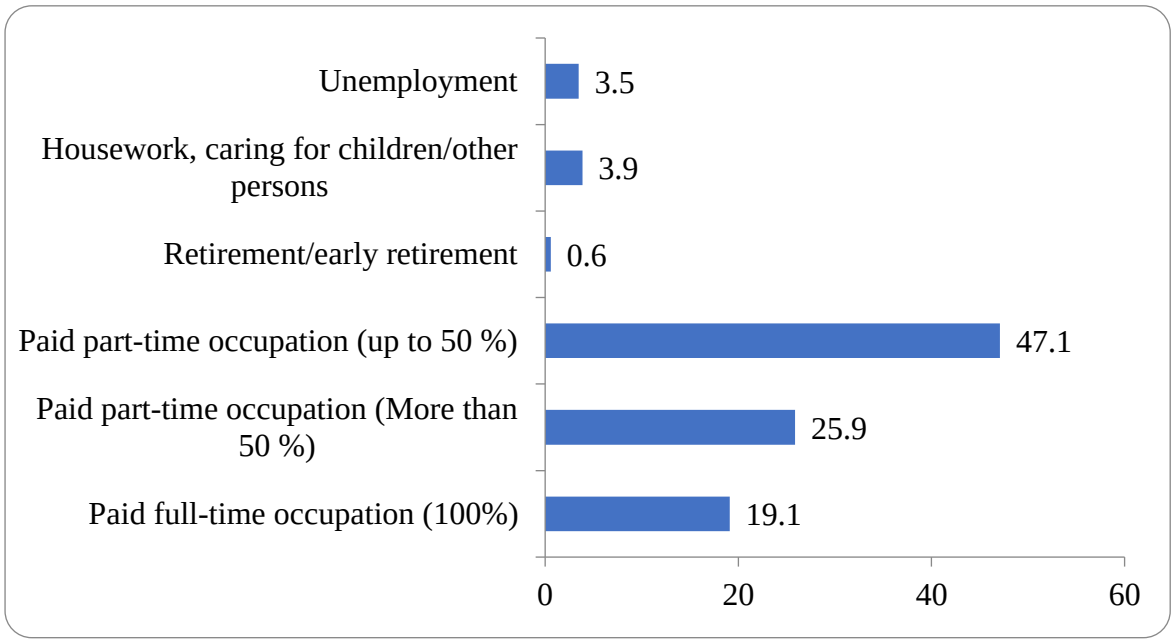

Figure 10: Percentage distribution Sub-Saharan African migrants in Germany by current primary occupation situation

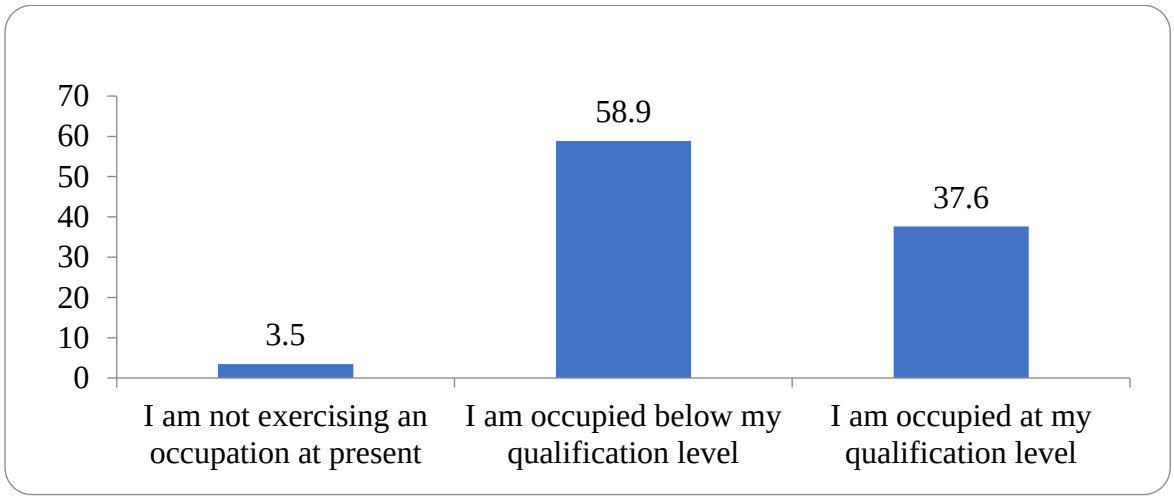

Figure 11: Percentage distribution of occupational level with educational attainment for Sub-Saharan African migrants in Germany

As shown in Figure 11 above, when asked to compare their current primary occupation with their highest educational attainment, almost 60 per cent of study participants reported being skilled or educated beyond what is necessary for their current job, while about one-third believe they are occupied at their qualification level.

Table 3: Percentage distribution of approximate gross annual income for Sub-Saharan African migrants in Germany (N =518)

Approximate gross annual income		Percentage
	Under € 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	0.4

Participants were asked to select which range best approximates their gross annual income. The result shows that one-third of the sample reported income below 10,000 Euro while another one third reported income ranging from 10,000 to 20,000 Euro.

3.4 Sub-Saharan African Migrant Migration and Residence.

Data on the reason for migration was analysed for better understanding of SSA migrants' situation and motivation in Germany. As presented in Figure 12, the percentage distribution of Sub-Saharan African migrants' reason for migration shows that almost 20 per cent rated lack of opportunity for future advancement in the country of origin as a strong determining factor (ranking 5 and 6) for migration. Another 44 per cent ranked it as having moderate (ranking 4 and 3) influence while about 36 per cent rated its influence low (ranking 2 and 1) on migration

decision. Consequently, less than 2 per cent reported general opportunity for the future in the country of origin as not having any influence on migration decision (ranking 0).

Poor (or lack of) social security was ranked the second strongest reason for migration at 19 per cent. One-third of the respondents ranked social security as a moderate reason for migration. Almost 45 per cent reported it as having low influence on migration decision while close to 2 per cent reported that social security has no influence at all. About 16 per cent ranked education/school system in the country of origin as a strong reason for migration. Close to 45 per cent ranked this factor as moderate while 38 per cent ranked it as a low influencer of migration decision. A little short of 2 per cent reported that education or school system did not influence their migration decision.

The economic situation in the country of origin was ranked as strong motivation for migration by 18 per cent, moderate by 44 per cent and low by 37 per cent of the respondents. Only about one per cent did not rate poor economic situation in the country of origin as a reason for migration. The political situation in the home country was ranked strong by 14 per cent, moderate by 40 per cent, low by 45 per cent, and "not at all" by only 0.2 per cent. Income, on however, was ranked as a strong reason for migration by 9 per cent, moderate by 38 per cent and low by about 50 per cent. About 3 per cent reported that low income in the country of origin does not influence SSA migrant migration decision.

Finally, about 8 per cent ranked other private reason(s) as a strong reason for migration. Close to 40 per cent ranked its influence moderate and more than half reported other private reason as motivation for migration. A little more than one percent believe private reasons did not influence their migration decision.

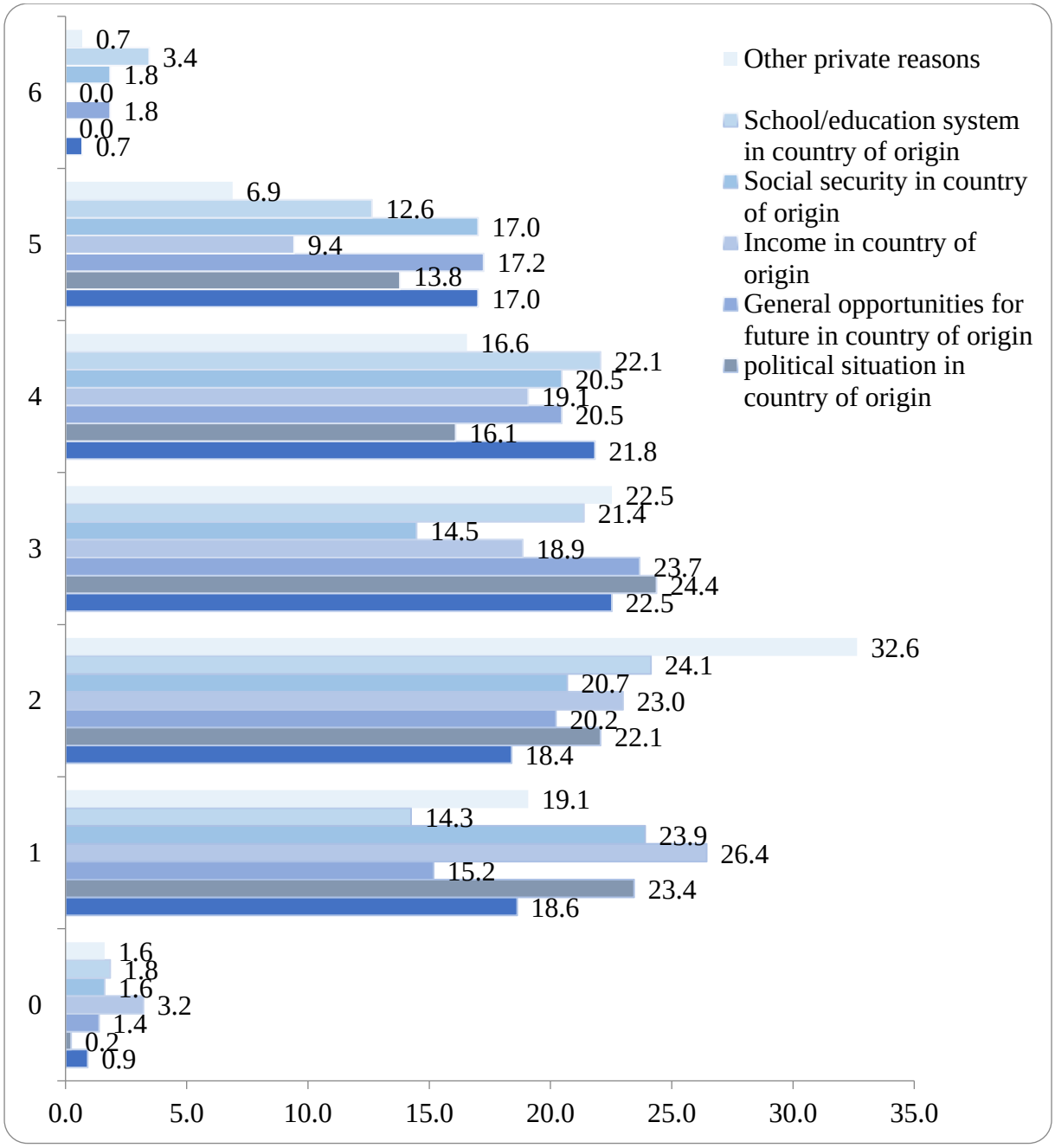

Figure 12: Percentage distribution of Sub-Saharan African migrants' reason for migration by 0 – 6 score

Data on the planned length of stay in Germany reveals only about 15 per cent of SSA migrants plan to stay permanently in Germany. Close to half plan to leave Germany after a residence period of over ten years, while about 13 per cent want to leave after five years (see Figure 13).

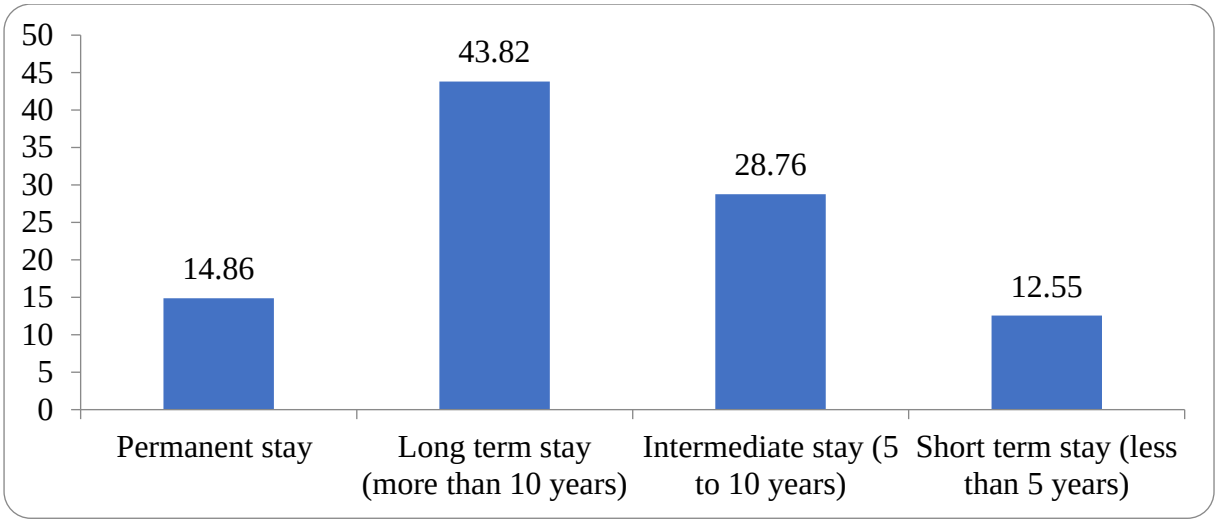

Figure 13: Percentage distribution of Sub-Saharan African migrants planned to stay in Germany

As presented in Figure 14 below, the percentage distribution of Sub-Saharan African migrants' length of current stay in Germany shows that over 60 per cent have lived in Germany for more than ten years. Less than 20 per cent recently moved to Germany (less than a year to three years) while the remaining 15 per cent have spent between 3 to 5 years in Germany.

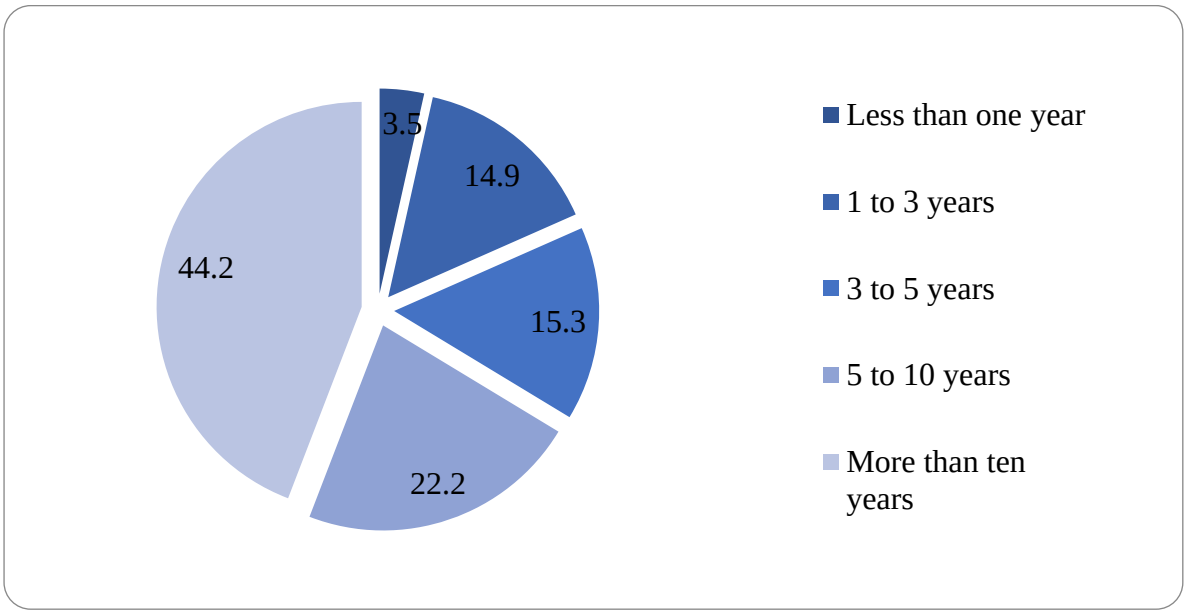

Figure 14: Percentage distribution of Sub-Saharan African migrants' length of current stay in Germany

Analysis of data on residence status presented in Figure 15 shows that almost half of SSA migrants have temporary residence status subject to renewal. Less than 30 per cent have

acquired the German citizenship or citizenship of another EU country that allows them to live and work freely in Germany while one quarter have a permanent residence status

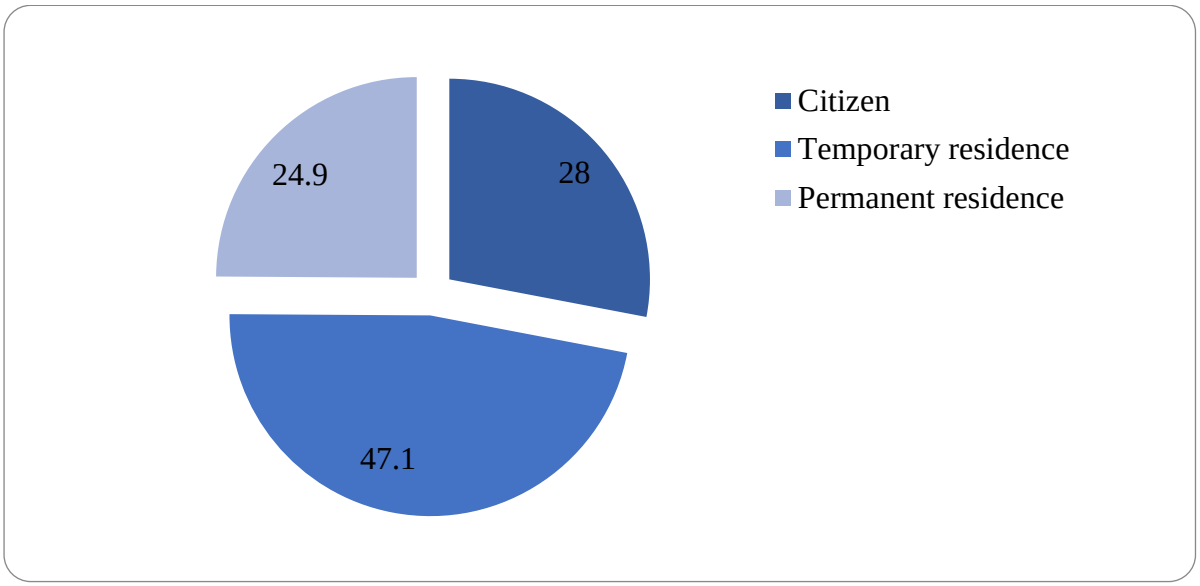

Figure 15: Percentage distribution of Sub-Saharan African migrants' residence status

3.5 Language competences

SSA migrants' English, French, German and other language competence were ranked on a 6-point scale ranging from 0 for "not at all" to 6 for "native" competence. As presented below, the percentage distribution shows that 14 per cent of SSA migrants reported being native speakers of the English language. While close to half have language competence above average, about 8 per cent reported no English language skill and the remaining one third reported little or average English language skill. This distribution therefore, implies a little over three-quarters of the SSA migrant's population in Germany have at least average English language skill: making it the language with most competence among SSA migrants in Germany (see Figure 16).

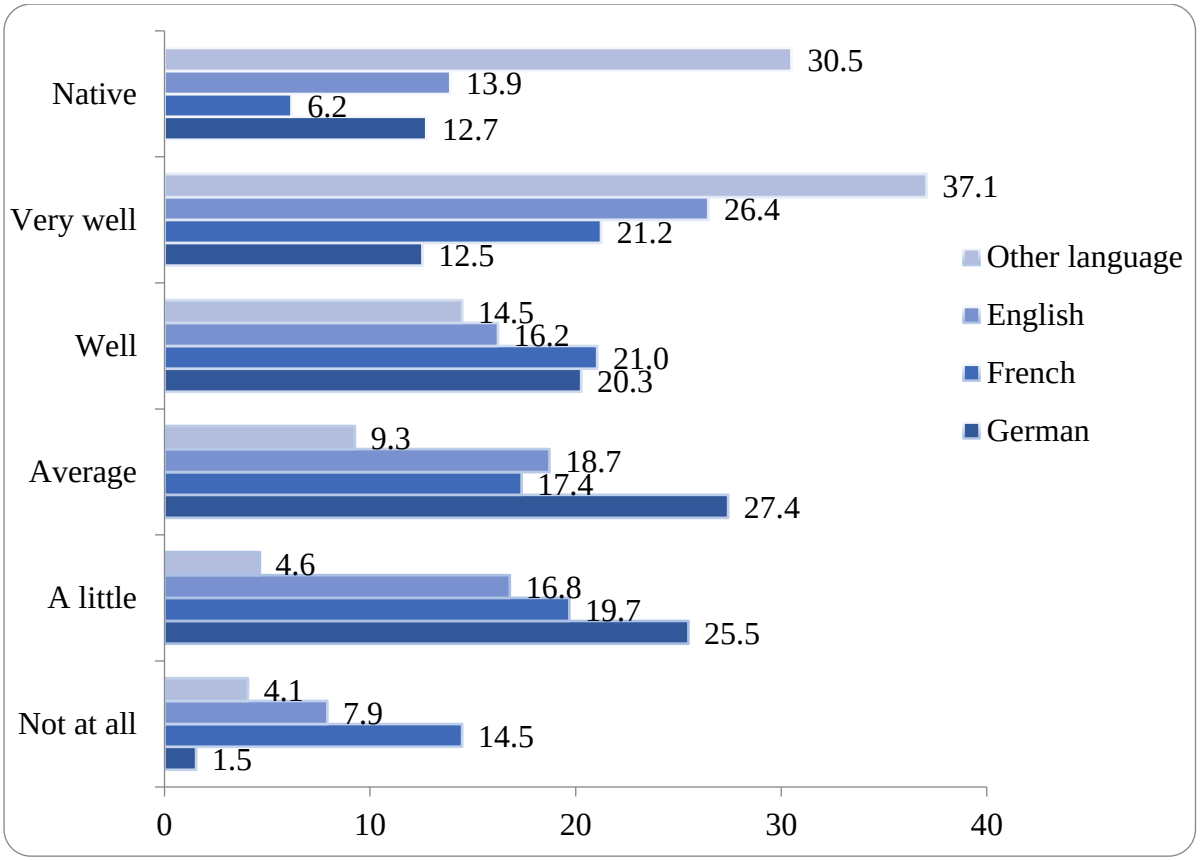

Figure 16: Language competence percentage distribution for Sub-Saharan African migrants in Germany

Further analysis of language competences shows that only about 6 per cent of SSA migrants in Germany are native speakers of the French language while more than double (15 per cent) reported no knowledge of French language. About 42 per cent have above-average knowledge of French; almost the same amount reported little or average French language competences.

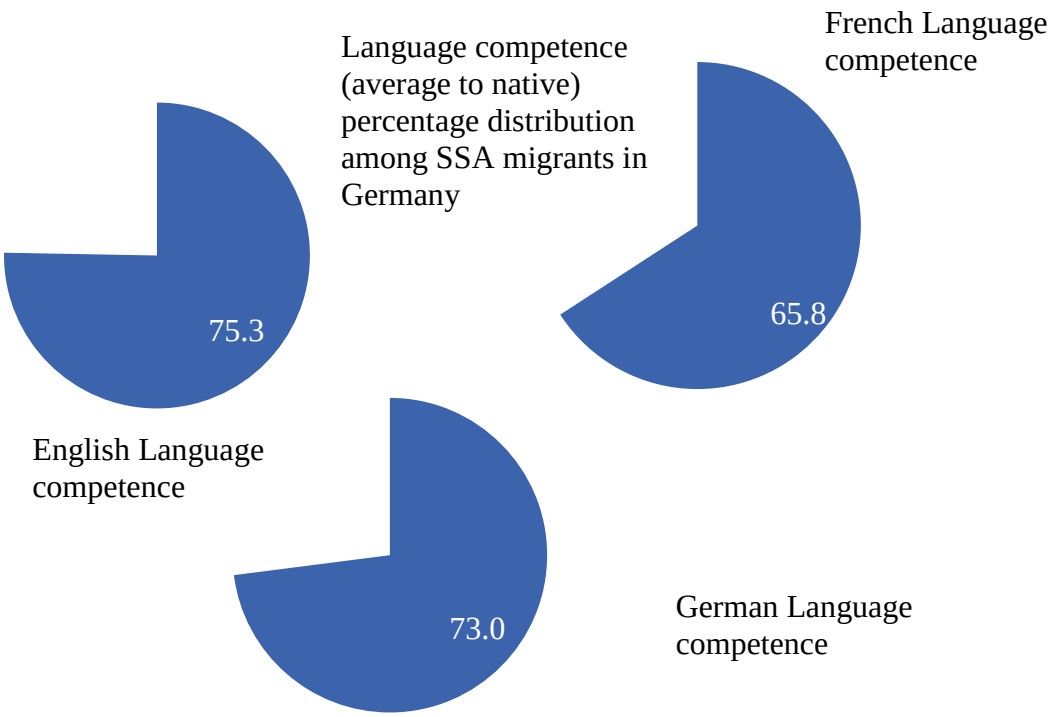

Figure 17: Language competence percentage distribution for Sub-Saharan African migrants in Germany

For German language, close to 13 per cent of SSA migrants in Germany rated their German language skill as native. About one third reported language skill above average but not native. However, more than half reported average or little German language competence while a little more than 1 per cent claim no knowledge at all. The ranking of German language competence, therefore, implies that close to three–quarters of SSA migrants have at least average skill of the German Language making it the second language with most competence among SSA migrants in Germany (see Figure 17 above).

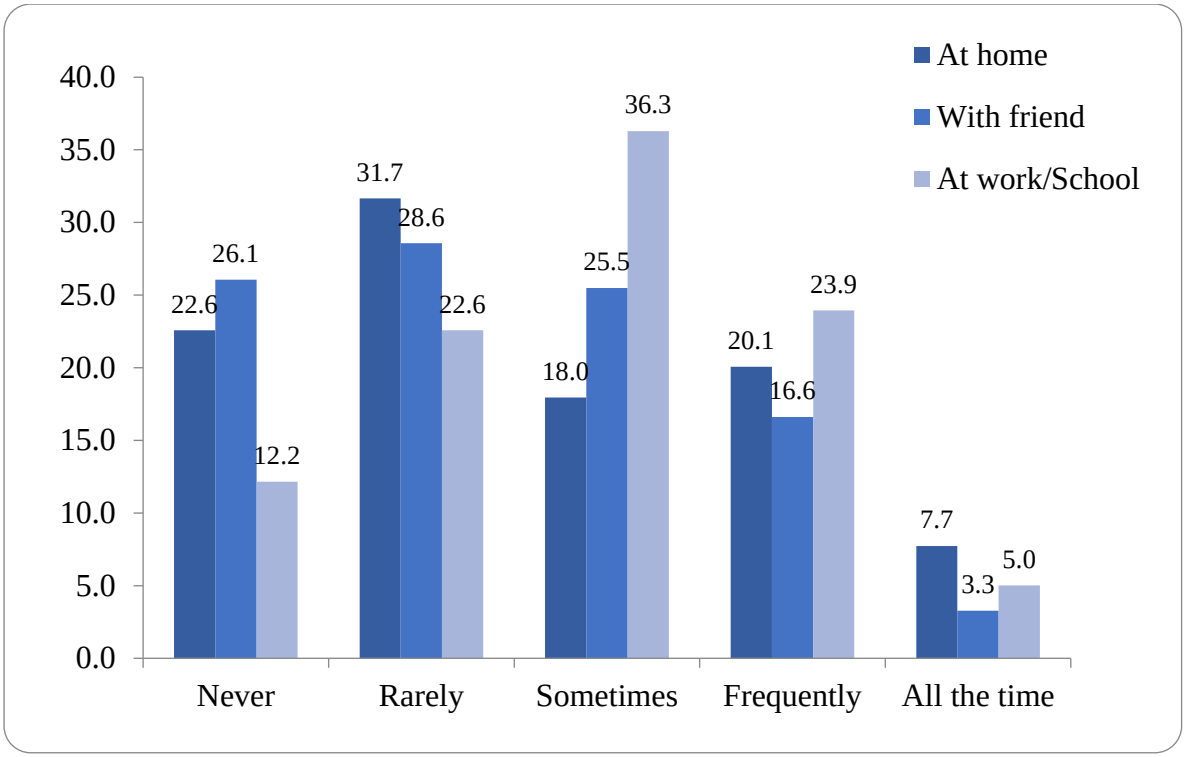

Figure 18: German Language usage percentage distribution for Sub-Saharan African migrants in Germany

Further in-depth analysis of data on German language usage shows that more half of SSA migrants in Germany rarely or never use the German language at home or with friends. On the other hand, only one-third rarely or never uses the German language at work.

As shown in Figure 18 below, over 60 per cent reported little or no written and verbal German language competence is required for their current job. Consequently, only a little over one quarter require at least good writing skills in the German language. For verbal, however, 11 per cent require at least good German language skill.

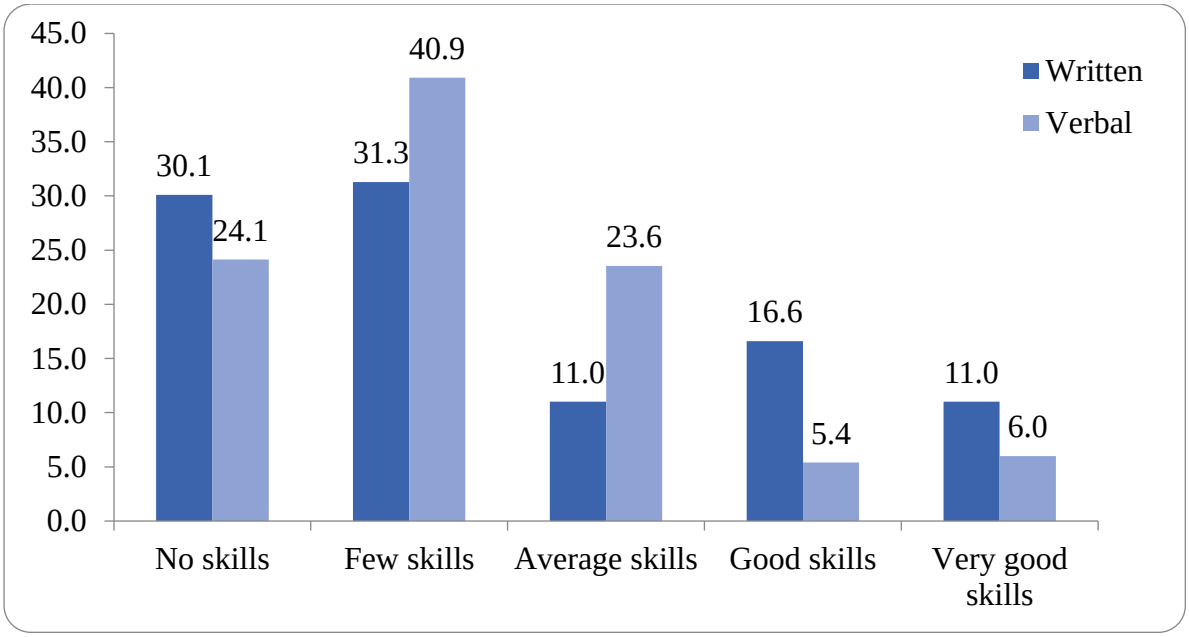

Figure 19: Percentage distribution of German language requirement for work for Sub-Saharan African migrants in Germany

3.6 Quality of life

Results of Sub-Saharan African migrants' quality of life as measured by the WHOQOL-BREF are presented in four domains, that is: physical health, psychological health, social relationships, and environment. As earlier indicated, we refer to Hawthorne, Herrman, & Murphy, (2006) norm population as a basis for score comparison and interpretation. Analyses show a generally low quality of life 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 points. Physical health domain reported an average score of 67.2 (SD 15.2) and 33.3 minimum score. Social relationships domain was third with a mean score of 60.5 (SD 21.2) and a minimum score of 8.3. Lastly, the environmental domain recorded the lowest scores with an average score of 60.2 (SD 16.4) and 6.2 minimum score.

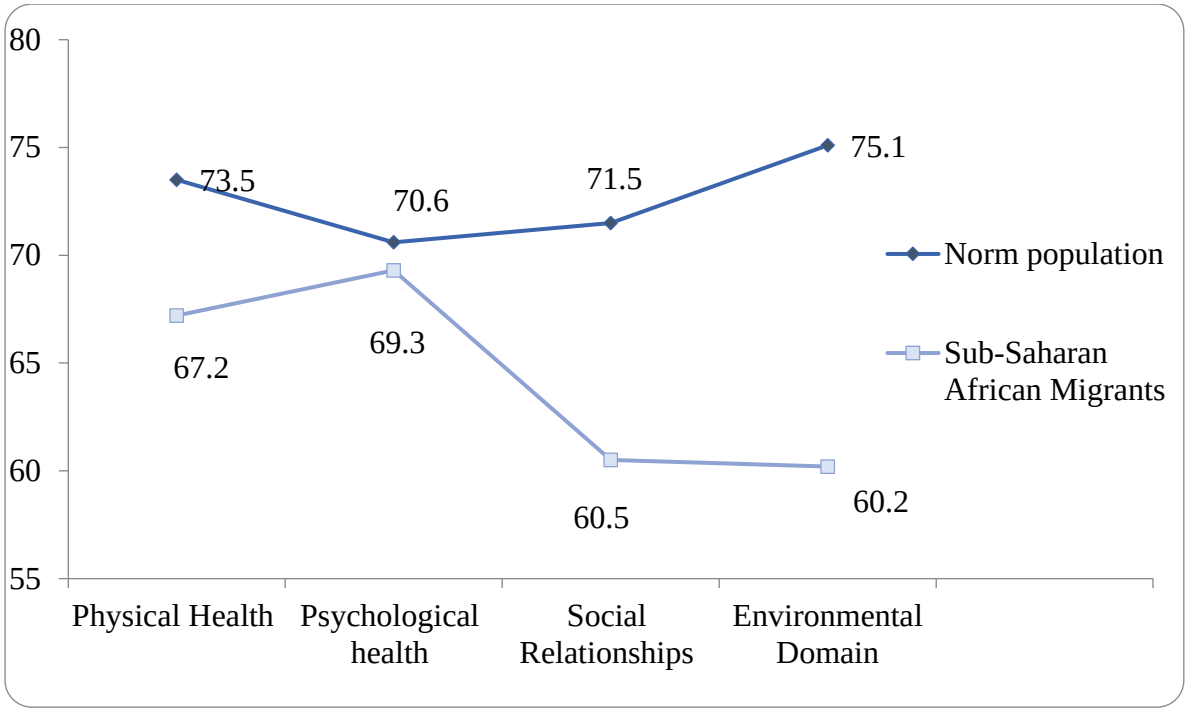

Figure 20: Sub-Saharan African migrants in Germany quality of life mean score by domain and Norm population mean score

3.6.1 Physical health domain of quality of life

Data on physical health was collected by aggregating SSA ranking of seven items. As presented in Table 4, close to half of the study participants reported average to low personal capability to perform usual daily living activities, including self-care and caring appropriately for properties. About a quarter reported dependence on medication or alternative medicines for supporting physical and psychological well-being. On the other hand, data on energy and fatigue shows that close to 60 per cent of the participants reported low energy, enthusiasm and endurance required for the performance of necessary daily living task and chosen activities.

Table 4: Sub-Saharan African migrant percentage distribution of quality of life physical health domain item rating (N = 518)

	Very low	Low	Neither nor	High	Very high
Capability to perform activities of daily living	2.1	13.7	32.0	41.9	10.2
Dependence on medicinal substance and aids	48.8	27.0	17.4	3.7	3.1
Low energy and fatigue	1.2	9.3	31.7	40.5	17.4
Mobility	2.5	7.7	20.1	44.8	24.9
Pain and discomfort	40.0	35.7	15.3	8.9	0.2
Sleep and rest	3.9	23.9	26.1	36.3	9.8
Work capacity	0.8	14.7	32.6	40.9	11.0
Physical Health *(Domain score: Mean = 67.2 SD = 15.2 Range= 78.6)*					

Analysis of data on mobility reveals over 70 per cent reported high capability to go to a predetermined destination without the help of others regardless of the means used to do so. Close to a quarter reported pain and discomfort in terms of unpleasant physical sensations experienced and the extent to which these sensations are distressing and interfere with life. Over half of the study participant reported dissatisfaction with their sleep and rest. Similarly, about half reported frustration with work capacity including paid work, unpaid work, voluntary community work, full-time study, care of children and household duties.

Further analysis exploring the effect of SSA migrants in Germany demography features on the physical health domain performance show no significant difference in the score by gender or region of origin. Age, on the other hand, was statistically significant for the mean score distribution of the physical health domain of quality of life. As presented in Table 5 below, younger SSA migrants (age 18 to 29) in Germany reported the highest mean score of 70.9; about 15 points lower than the mean score from the same age group in the Norm distribution. Similarly, SSA migrants aged between 30 -39 reported a lower mean of 65.9.

Table 5: Physical health domain mean score distribution by age group for Sub-Saharan African migrant in Germany and Norm distribution (N = 518)

	Sub-Saharan African Migrants in Germany					Norm distribution				
				95% CI for Mean					95% CI for Mean	
	N	Mean	SD	Lower Bound	Upper Bound	N	Mean	SD	Lower Bound	Upper Bound
Age 18 - 29	220	70.9	12.2	69.3	72.5	47	85.4	10.9	82.2	88.6
Age 30 - 39	201	65.9	16.1	63.7	68.1	87	82	13.5	79.1	84.9
Age 40 - 49	85	62.7	17.6	58.9	66.5	88	77.8	19.8	73.6	82
Age 50 - 59	12	53.9	13.2	45.5	62.3	66	80.3	16.9	76.1	84.6
Total	518	67.2	15.2	65.9	68.5					

This score compared to the Norm distribution, also reflects a 15 negative point difference for SSA migrants in Germany. Results for age group 40 to 49 confirms that SSA migrants' physical health measure of the quality of life declines with age. Having reported a mean score of 62.7, this group falls about 3 points lower than the performance from previous age groups and 15 negative points from the mean score reported by the same age group in the Norm distribution. While the mean score continues to decrease with age group, SSA migrants age group between 50 to 59 reported by far the widest gap (26.4 negative points) when compared to the reported score for the same age group in the Norm distribution.

Physical health performance by the state of residence reveals that the two southernmost federal states (Baden-Württemberg (mean = 72.2) and Bavaria (mean = 69.5)), Berlin (mean = 70.1) and Hamburg (mean = 69.3) reported the highest quality of life score well above the average sample mean score range (65.9 - 68.5) for SSA migrants in this domain. Hesse (68.3), and North-Rhine Westphalia (67.7) also reported mean scores slightly above the sample mean score but within the mean range. Participants from Brandenburg (67.0) Schleswig-Holstein, Mecklenburg-Vorpommern reported a mean score proximate to the sample mean and within

mean range. Consequently, Thuringia, Lower Saxony, Bremen, Saxony-Anhalt, Rhineland-Pfalz, and Saarland reported the lowest mean score below the mean range for physical health ranging from 65.5 in Thuringia to 56 in Saarland. (see Figure 20)

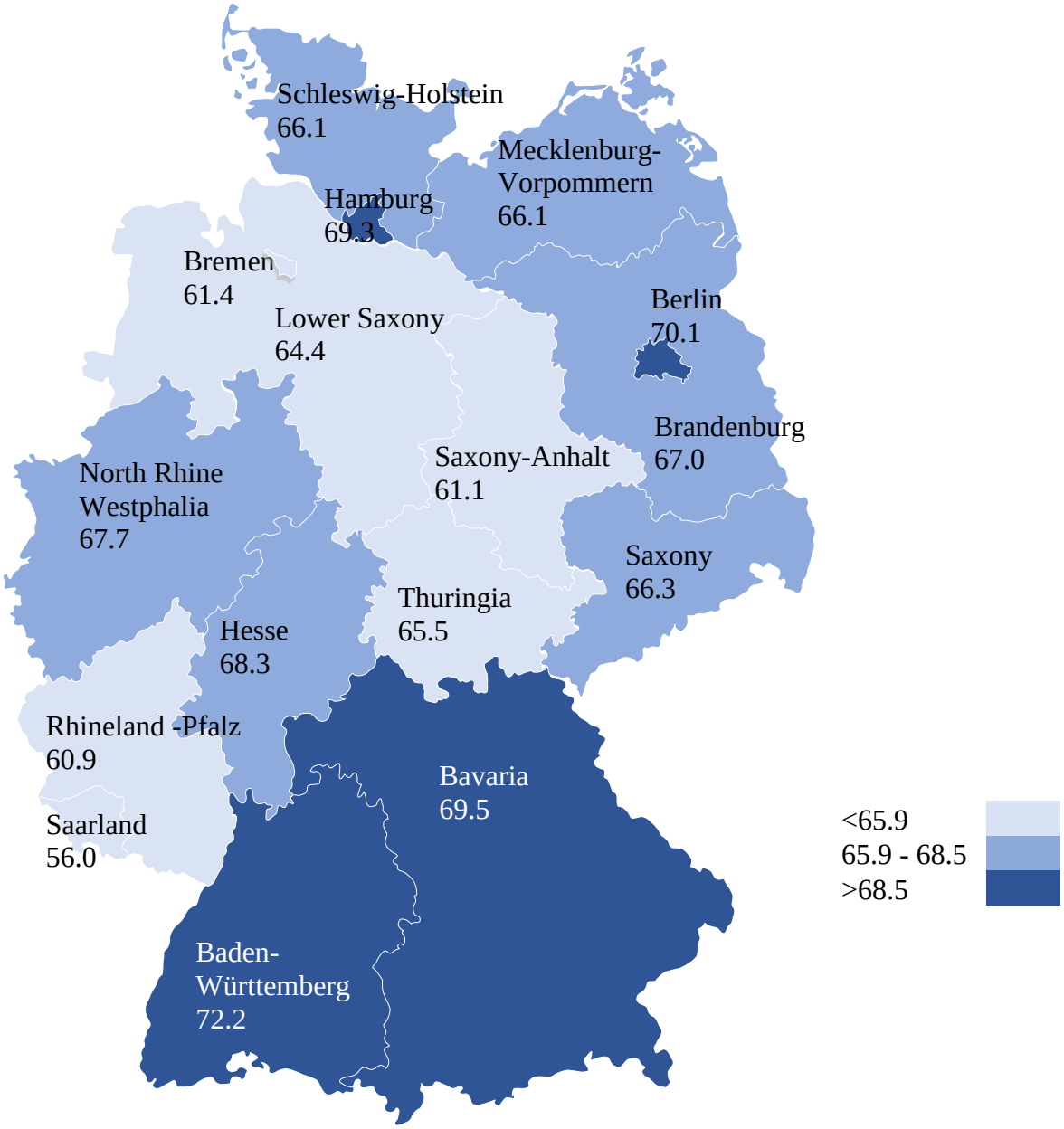

Figure 21: Quality of life - physical Health domain mean scores by the federal state of residence in Germany

3.6.2 Psychological health domain of quality of life

The psychological domain of quality of life was assessed by aggregating SSA migrants' ranking of six facets of psychological health. Approximately 70 per cent reported satisfaction

with the way they look and the effect it has on their self-concept. Analysis of data on negative feeling reveals that close to 90 per cent of SSA migrants in this study reported distress resulting from despondency, guilt, sadness, tearfulness, despair, nervousness, anxiety and a lack of pleasure in life. On the other hand, less than half reported high positive feelings in terms of their feelings of contentment, balance, peace, happiness, hopefulness, joy and enjoyment of the good things in life. Only about half reported high self-esteem regarding the personal feelings of self-efficacy, satisfaction with oneself and control. Contrarily, two-thirds reported high spirituality that incorporates personal coping strategy, gives structure to experience, and more generally provides a sense of well-being. Data on concentration – as a measure of SSA psychological health – shows that far less than half of the sample population feels able to concentrate on thinking, learning, memory and making decisions (see Table 6).

Table 6; Sub-Saharan African migrant percentage distribution of quality of life psychological health domain of quality of life (N = 518)

	Very low	Low	Neither nor	High	Very high
Bodily image and appearance	1.2	6.6	22.2	43.1	27.0
Negative feeling	9.7	36.7	35.1	17.0	1.5
Positive feeling	1.2	14.5	37.3	42.5	4.6
Self-esteem	1.2	19.3	26.6	35.7	17.2
Spirituality/religion/personal belief	0.8	8.3	27.4	40.2	23.4
Concentration	3.1	18.7	42.1	32.8	3.3
Psychological *(Domain score: Mean = 69.3 SD = 14.6 Range=66.7)*					

Analysis of demographic data presented in Table 7 shows no significant association between gender and psychological health for SSA migrants in Germany. Similarly, the region of origin was not statistically significant for the performance in this domain of quality of life. However, further analysis shows age as a significant predictor of psychological health performance

among SSA migrants in Germany. As shown in Table 3.6.4 below, older SSA migrants (age 50 to 59) reported the lowest mean score (58.3) about 13 points lower than the mean score reported by the youngest age group and 15 points below the score reported by 50 to 59 age group in the Norm distribution.

Table 7: Psychological health domain mean score distribution by age group for Sub-Saharan African migrant in Germany and norm distribution (N = 518)

	Sub-Saharan African Migrants in Germany					Norm distribution				
				95% CI for Mean					95% CI for Mean	
	N	Mean	SD	Lower Bound	Upper Bound	N	Mean	SD	Lower Bound	Upper Bound
Age 18 - 29	220	71.8	14.2	69.9	73.7	47	71.4	17.5	66.3	76.5
Age 30 - 39	201	69.4	14.5	67.3	71.4	87	73.5	14	70.5	76.5
Age 40 - 49	85	64.4	14.3	61.3	67.4	88	71.5	14.4	68.4	74.6
Age 50 - 59	12	58.3	10.7	51.6	65.1	66	73.8	12.6	70.7	76.9
Total	518	69.3	14.6	68.1	70.6					

SSA migrant participants aged 18 to 29 reported mean score slightly (0.4 points) above the average score reported for the same age group in the Norm distribution. This advantage however disappears for the proceeding age groups. For instance, the age groups 30 to 39 and 40 to 49 reported mean scores 4.1 and 7.1 below that reported by corresponding age groups in the Norm distribution. Generally, as SSA migrants' age increases, their rating in psychological health decreases while the score slides even farther away from the norm distribution performance.

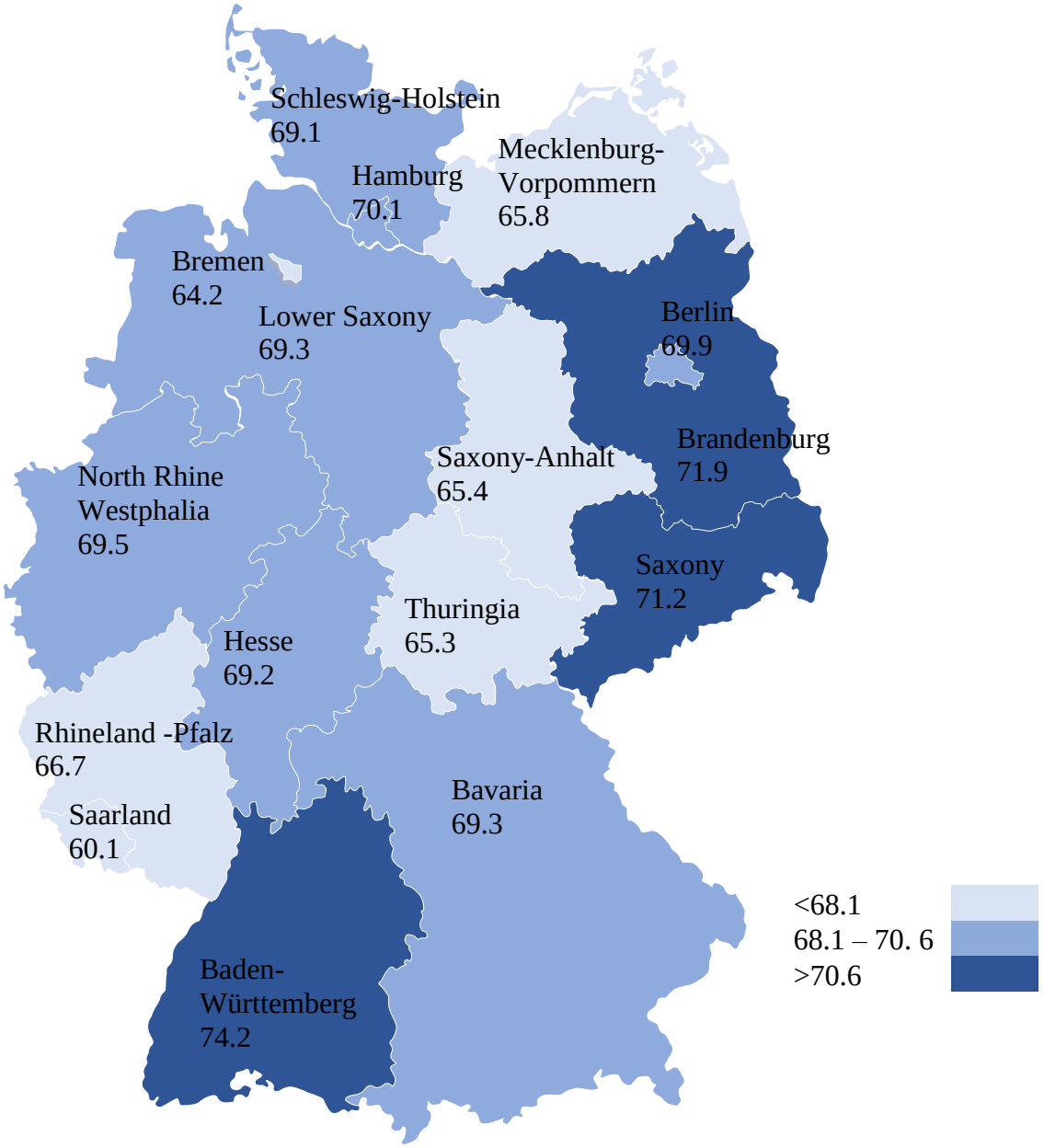

Figure 22: Quality of life - psychological health domain mean scores by the federal state of residence in Germany

SSA migrant's psychological health distribution by the federal state of residence reveals that participants living in Baden-Württemberg reported the highest mean score of 74.2. Similarly, Saxony and Brandenburg reported mean scores above the mean range (lower bound = 68.1 upper bound = 70.6). Hamburg, Bavaria, Hasse, North Rhine Westphalia, Lower Saxony and Schleswig-Holstein reported mean scores falling within the lower bound and upper bound mean score ranging from 70.1 in Hamburg and 69.1 in Schleswig-Holstein.

While Saarland reported the lowest mean score (60.1), other states (Mecklenburg-Vorpommern, Rhineland -Pfalz, Saxony-Anhalt and Thuringia) reported mean scores lower than the lower bound mean score (see Figure 21).

3.6.3 Social relationships domain of quality of life

The social relationship domain of quality of life was assessed by evaluating participants' personal relationships, social support and satisfaction with sexual relationships. Results show that just a little over half reported a high feeling of companionship, love and support from the intimate relationship(s) in their life. Similarly, close to half reported unmet social support in terms of commitment, approval, and availability of practical assistance from family and friends. Data on satisfaction with sexual relationships reveals less than half of the participants were contented with the extent to which they can express and enjoy their sexual desire appropriately (see Table 8).

Aggregated scores from these items return a mean score of 60.5 for the social relationship domain of SSA migrants' quality of life in Germany.

Table 8: Sub-Saharan African migrant percentage distribution of quality of life social relationships domain of quality of life (N = 518)

	Very low	Low	Neither nor	High	Very high
Personal relationship	3.7	17.0	24.1	37.5	17.8
Social support	3.1	7.9	30.7	46.1	12.2
Sexual relationship	8.5	16.4	33.0	30.1	12.0
Social Relationships *(Domain score: Mean = 60.5 SD = 21.3 Range= 91.7)*					

Independent sample T-Test shows a significant difference in social relationship domain performance for male and female ($p<0.001$). As shown in Figure 22 below, female SSA migrants reported higher performance in the social relationship domain of quality of life with a mean score of 61.3 (SD 20.3). Data on the region of origin, on the other hand, shows no significant effect on SSA migrants' performance in the social relationship domain of quality of life.

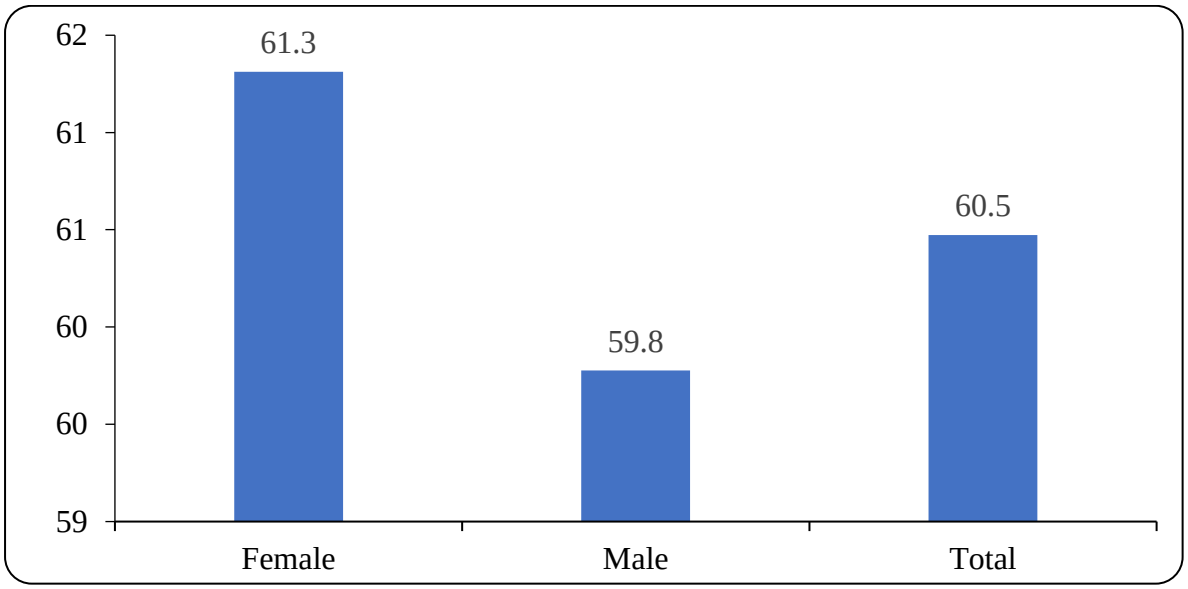

Figure 23: Social Relationship domain mean score distribution by gender for Sub-Saharan African migrant in Germany

Results from analysis of data on age return significant effects on SSA migrants rating of social relationships. Participants age 18 – 29 reported the highest mean score of 64.6 and about 4.3 points below the score reported by the same age group in the Norm distribution. SSA migrant's performance in social relationship domain of quality of life continues to decline as age increases. Participants aged 50 to 59 reported lowest mean score 44.4, over 20 points below the score reported by age group 18 to 29 and close to thirty points less than same age group (50 - 59) in norm distribution. The result presented in Table 9 below further reveals that the difference in SSA migrants' performance compared to the norm population increases as age increase. While the age group 18 to 29 reported 8.3 points below the score for Norm

distribution, the immediate next group (age 30 - 39) reported almost double gap (15.5 points) below norm distribution scores.

Table 9: Social relationships domain mean score distribution by age group for Sub-Saharan African migrant in Germany and norm distribution (N = 518)

	Sub-Saharan African Migrants in Germany					Norm distribution				
				95% CI for Mean					95% CI for Mean	
	N	Mean	SD	Lower Bound	Upper Bound	N	Mean	SD	Lower Bound	Upper Bound
Age 18 - 29	220	64.6	20.1	61.9	67.3	47	72.9	18.8	67.4	78.4
Age 30 - 39	201	58.2	20.6	55.3	61.1	87	73.7	19.4	69.6	77.8
Age 40 - 49	85	57.5	23.4	52.4	62.5	88	72.1	17.7	68.3	75.9
Age 50 - 59	12	44.4	21.7	30.6	58.2	66	73.1	18.2	68.6	77.6
Total	518	60.5	21.3	58.6	62.3					

Analysis of data on the state of residence and social relationships presented in Figure 23 below reveals SSA migrants in Berlin reported the highest mean score (71.4) and approximately 10 points above the sample mean score upper bound. Similarly, data from Baden-Württemberg (67.0), Brandenburg (66.7), Rhineland-Pfalz (66.7) and Thuringia (63.9) shows a mean distribution evidently above the sample mean upper bound. SSA migrants' participants from Lower Saxony, Schleswig-Holstein, Mecklenburg-Vorpommern, North Rhine Westphalia, Hasse and Hamburg, reported mean scores with the 95 per cent confidence interval mean score ranging from 61.8 in Schleswig-Holstein and 60.1 in Hamburg. Consequently, the remaining federal states, i.e., Bavaria, Saxony, Saarland, Saxony-Anhalt and Bremen reported mean score below the lower bound mean score.

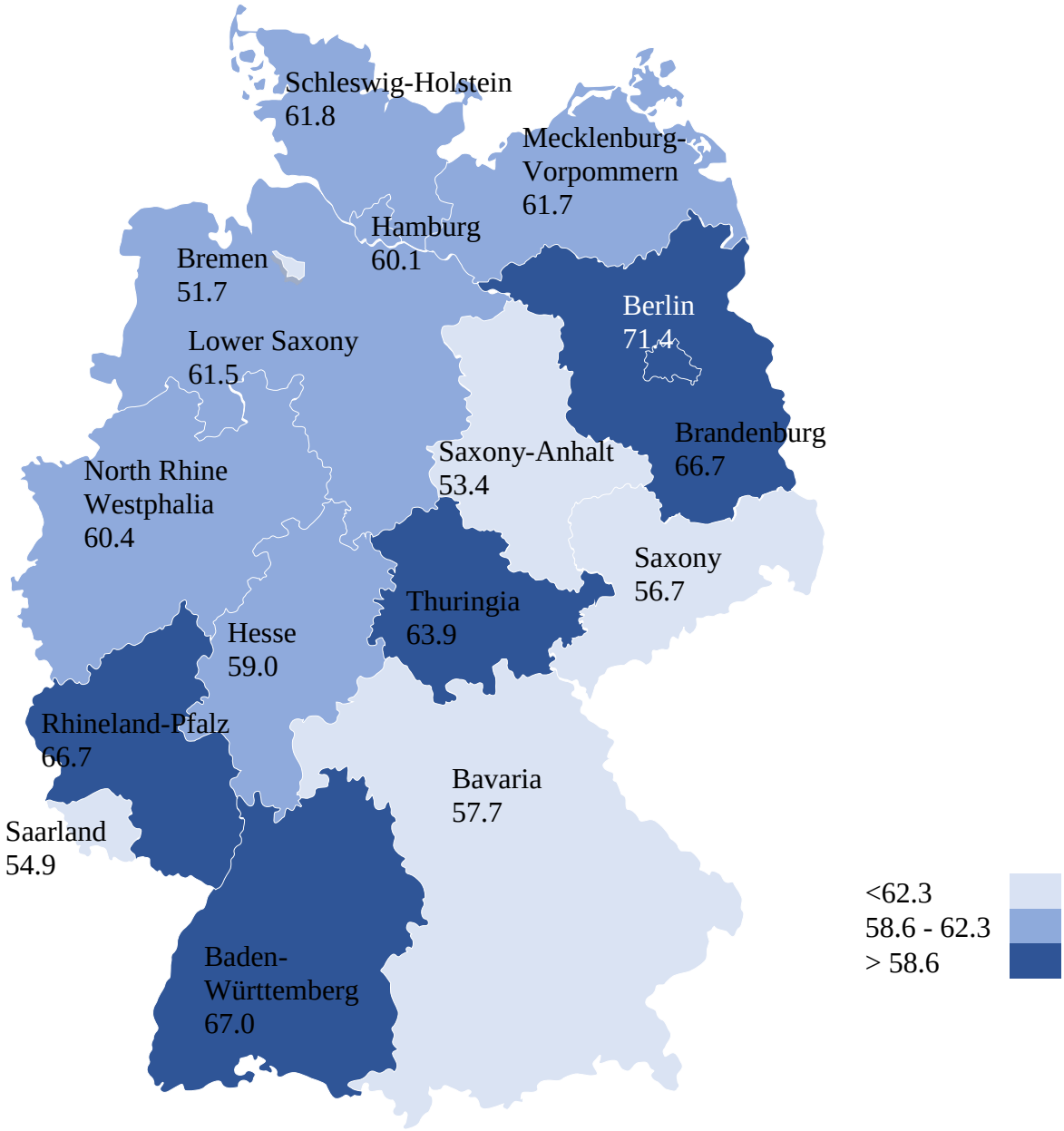

Figure 24: Quality of life - social relationships domain mean scores by the federal state of residence in Germany

3.6.4 The environmental domain of quality of life

This domain of quality of life focuses on the resources available in one's environment that facilitates well-being. As shown in Table 10 below, close to 80 per cent reported unmet financial needs or lack of other exchangeable resources crucial for a healthy and comfortable lifestyle. Data on freedom and safety reveals that around about two-thirds reported high safety and personal freedom that facilitate living without constraints. Similarly, about 70 per cent are

satisfied with the availability of, and access to health and social services as well as the quality and completeness of care they expect to receive should these services be required. Data on living space in terms of where a person lives (and, at a minimum, sleeps and keeps most of his/her possessions) shows only a little over half are satisfied with their home environment and the way that this impacts on their personal life. On the other hand, more than half reported a substantial lack of opportunity for acquiring new information and skills. Close to 80 per cent reported deficiencies in the personal capacity for opportunities for, and enjoyment of recreation and relaxation. On the contrary, over 65 per cent are satisfied with their physical environment concerning the aspects of noise, pollution, climate and general aesthetics of the environment and its effect on the quality of life. Lastly, close to three-quarters are satisfied with the availability of and ease of finding and using transport services to get around.

Table 10: Sub-Saharan African migrant percentage distribution of quality of life environmental domain of quality of life (n = 518)

	Very low	Low	Neither nor	High	Very high
Financial Resource	12.0	27.6	39.2	18.9	2.3
Freedom, physical safety and security	4.6	12.0	23.9	47.7	11.8
Health and social care: accessibility and quality	2.1	5.0	22.4	43.2	27.3
Home Environment	5.4	15.3	24.9	42.5	12.0
Opportunity for acquiring new information and skills	3.5	14.7	36.9	30.5	14.5
Participation in and opportunity for recreation and leisure activities	10.6	31.5	34.2	15.6	8.1
Physical environment (pollution, noise/traffic/climate)	2.1	7.7	25.1	49.6	15.4
Transport [b]	0.8	5.4	22.2	47.7	23.9
Environment *(Domain score: Mean =60.2 SD =16.4 Range= 90.6)*					

Analysis of gender as a predictor of quality of life returns no significant difference in mean score for SSA migrants' environmental domain of quality of life. On the other hand, the region of origin proves to be statistically significant for SSA migrant performance in the environmental domain of quality of life. As shown in Figure 24 below, SSA migrants born outside of the sub-Sahara region of Africa (e.g., born in Germany) reported higher environmental mean score that exceeds sample mean score (60.2). Within those born in a Sub-Saharan Africa country however, migrants from the Southern region of Africa, including Namibia, South Africa and Botswana, reported higher mean score that corresponds with the sample mean score. SSA migrants from West Africa including Nigeria, Ghana, Togo, Benin Republic, reported mean score in close proximate but 0.4 points below the sample mean score. Central Africa, including Cameron, Angola Gabon and Republic of Congo reported the lowest mean score of 56.3, about 10 points lower than migrants born outside of SSA region and 4 points below the mean score.

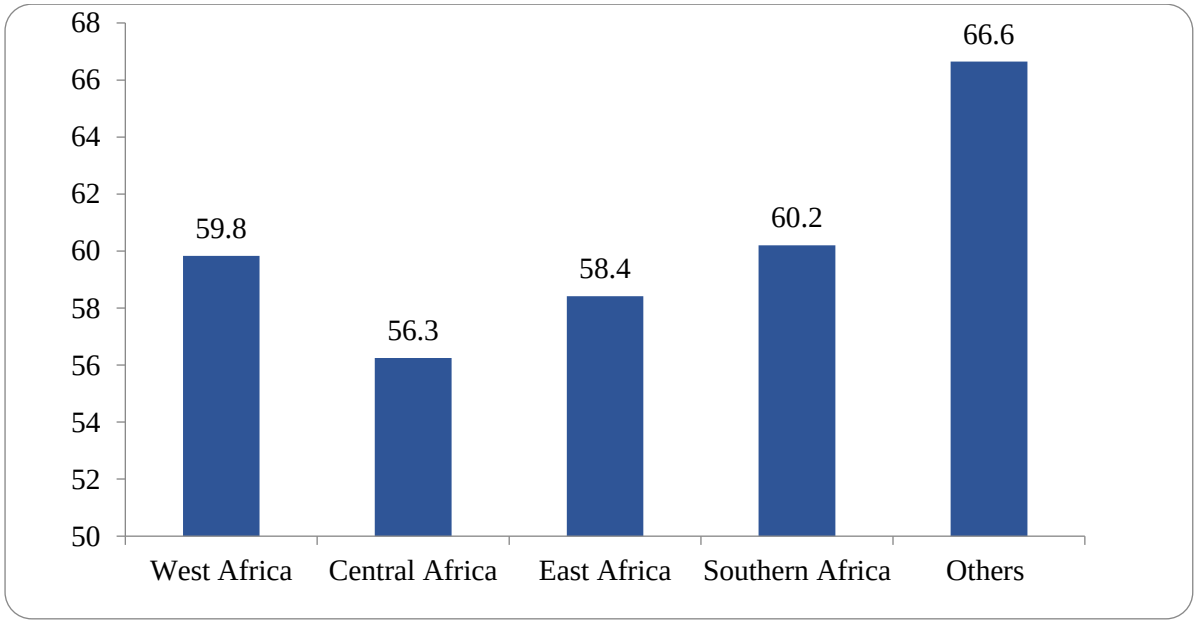

Figure 25: Environmental domain mean score distribution by region of origin for Sub-Saharan African migrant in Germany.

Age similarly, was significant for SSA migrants' performance in the environmental domain of quality of life. Contrary to the norm population where older ages reported the highest mean score, participants aged between 18 to 29 reported the highest mean score for SSA migrants sample in Germany. As shown in Table 11 below, the reported mean score decline sharply as age increases. Participants aged 50 to 59 reported lowest mean score (45.1); about 22 points below mean score reported by the youngest age group (18 to 29) and about 7 points from the proceeding age group (40 to 49). While SSA migrants' performance was below the Norm distribution in all age group, this gap in the distribution was widest for participants aged 50 to 59 with over 30 deficit points below mean score from the same age group in the norm distribution.

Table 11: Environmental domain mean score distribution by age group for Sub-Saharan African migrant in Germany and norm distribution (N = 518)

	Sub-Saharan African Migrants in Germany					Norm distribution				
				95% CI for Mean					95% CI for Mean	
	N	Mean	SD	Lower Bound	Upper Bound	N	Mean	SD	Lower Bound	Upper Bound
Age 18 - 29	220	66.8	12.5	65.2	68.5	47	74.3	14	70.2	78.4
Age 30 - 39	201	57.2	17.6	54.7	59.7	87	73.2	12.5	70.5	75.9
Age 40 - 49	85	52.0	16.0	48.5	55.4	88	72.3	12.9	69.6	75
Age 50 - 59	12	45.1	12.0	37.4	52.7	66	77	13.3	73.7	80.3
Total	518	60.2	16.4	58.7	61.6					

Results from SSA migrant's environmental domain of quality of life performance by the state of residence reveals migrants from Baden-Württemberg, Mecklenburg-Vorpommern and Brandenburg reported higher mean scores above the upper mean bound (61.6). Hamburg, North Rhine-Westphalia, Berlin, Hasse, Thuringia, Schleswig-Holstein, and Bavaria reported mean score within the lower (58.7) and upper bound (61.6) mean with sample mean score ranging

from 61.8 in Hamburg and North Rhine-Westphalia to 59.4 in Bavaria. On the other hand, Rhineland-Pfalz reported the lowest mean score of 18 points lower than Baden-Württemberg. Similarly, Saxony-Anhalt, Lower Saxony, Saxony, Bremen and Saarland reported mean scores lower than the lower bound sample mean score (see Figure 25).

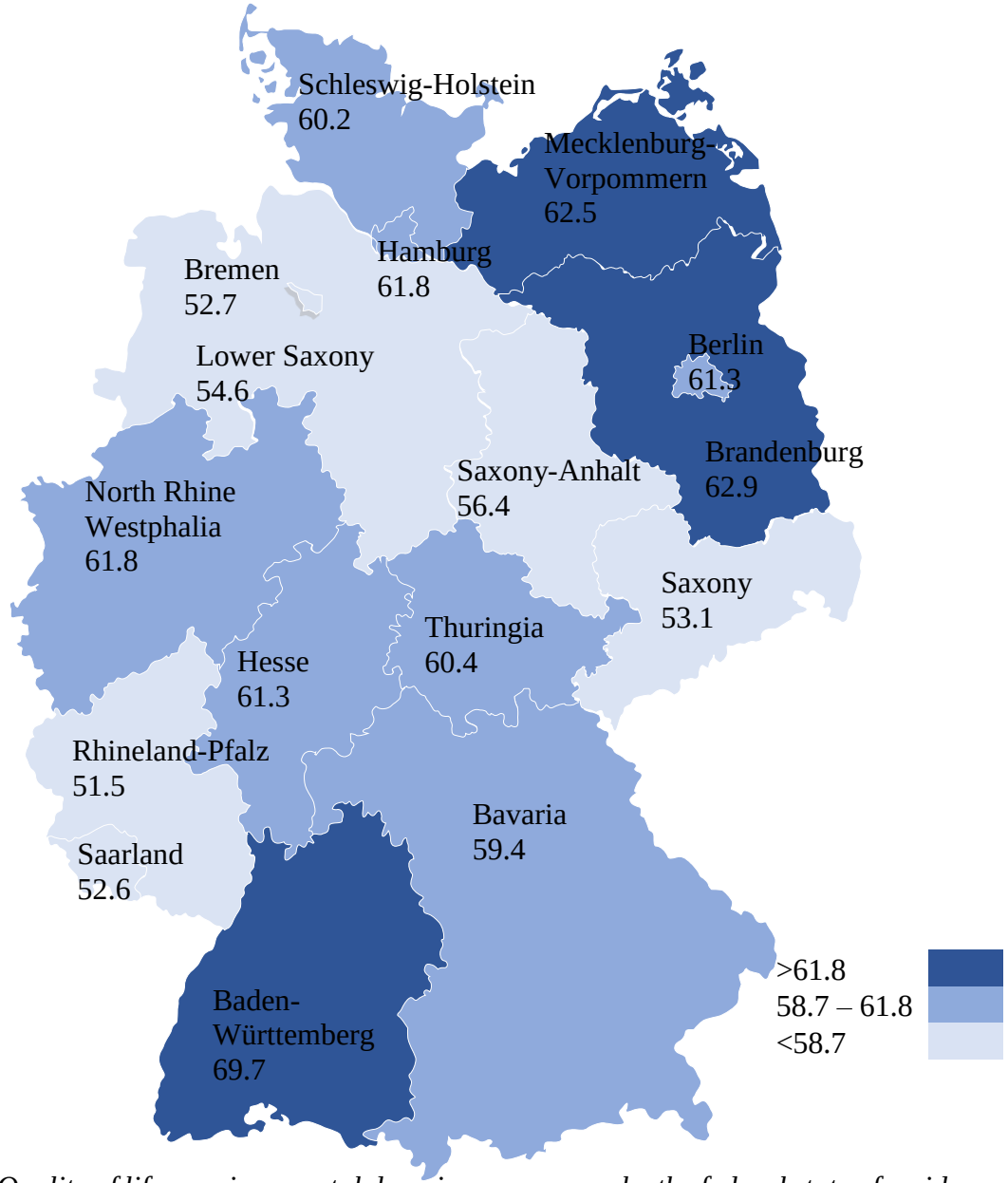

Figure 26: Quality of life - environmental domain mean scores by the federal state of residence in Germany

3.6.5 Aggregate quality of life (EUROHIS-QOL 8-item Index)

Analysis of summarised data on aggregate quality of life reveals that SSA migrants reported an average score of 3.4 (SD 0.7). The categorised score shows that less than half of the study participants reported a high quality of life score. As presented in Figure 26 below, only about 45 per cent reported a high quality of life performance.

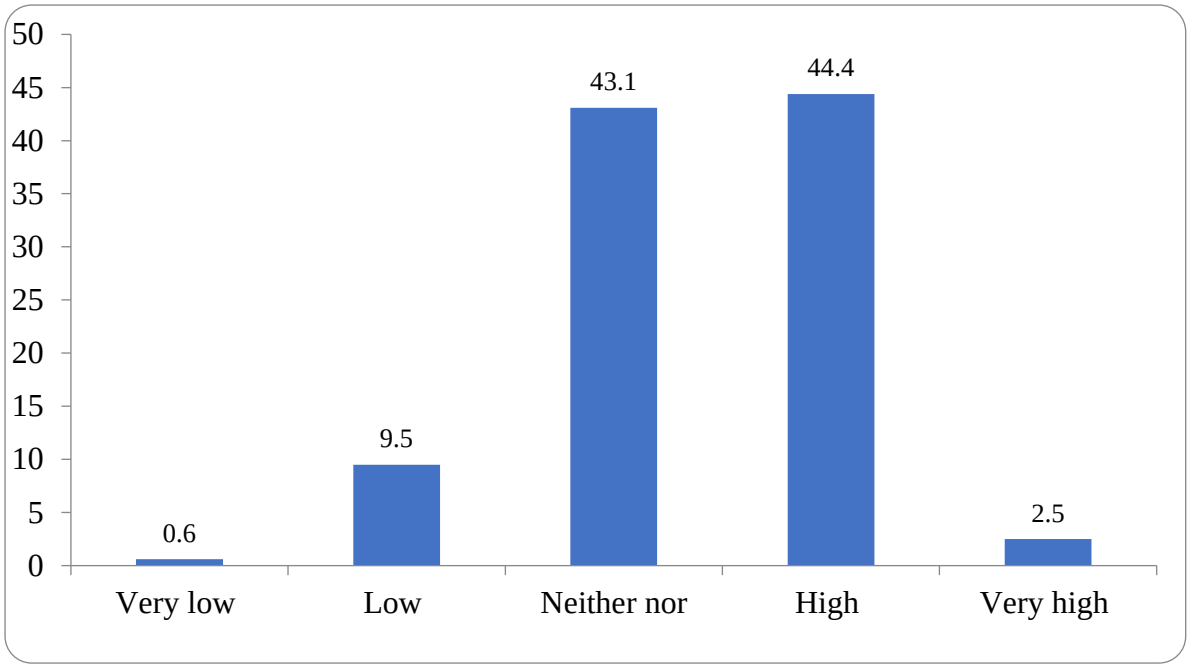

Figure 27: Aggregate quality of life percentage distribution for Sub-Saharan African migrants in Germany

Results from the analysis of variance (ANOVA) between age and aggregate quality of life performance suggest age as a significant predictor for aggregate quality of life for the sample of SSA migrants in Germany ($p < 0.001$). As presented in Table 12 below, about 57 per cent of participants aged 18 to 29 reported a high quality of life while only 42 per cent of participants aged 30 to 39 reported a high quality of life. Similarly, the quality of life performance for the proceeding age groups continues to decline. Only 35 per cent of participants age 40 to 49

reported a high quality of life and 16 per cent for age 50 to 59. As shown in Table 3.6.9 below, this distribution confirms that younger SSA migrant performs better in overall quality of life.

Table 12: Crosstabulation of aggregate quality of life and age for sub-Saharan African migrants in Germany (N = 518)

		Aggregate quality of life					
		Very Low	Low	Moderate	High	Very high	Total
Age	Age 18 - 29	0	5	89	125	1	220
	Age 30 – 39	1	28	87	78	7	201
	Age 40 – 49	2	13	40	25	5	85
	Age 50 – 59	0	3	7	2	0	12
Total		3	3	49	223	13	518

Analysis of data on the region of origin shows no significance in aggregate quality of life for SSA migrants in Germany. Similarly, data on gender reveal no significant difference in the quality of life performance for male and female.

As presented in Figure 27 below, data on the state of residence shows Baden-Württemberg, reported the highest mean score. Berlin, Brandenburg, Thuringia, Bavaria, Hamburg follow the trend with mean scores (3.6 in Berlin and 3.5 in Hamburg) above the sample mean score (3.4). Schleswig-Holstein, North Rhine Westphalia, Hesse and Saxony reported mean score equal to sample mean (3.4). On the other hand, Mecklenburg-Vorpommern, Lower Saxony, Saxony-Anhalt, Bremen, Rhineland-Pfalz, Saarland, reported mean scores below the sample mean ranging from 3.3 in Mecklenburg-Vorpommern and 2.9 in Saarland.

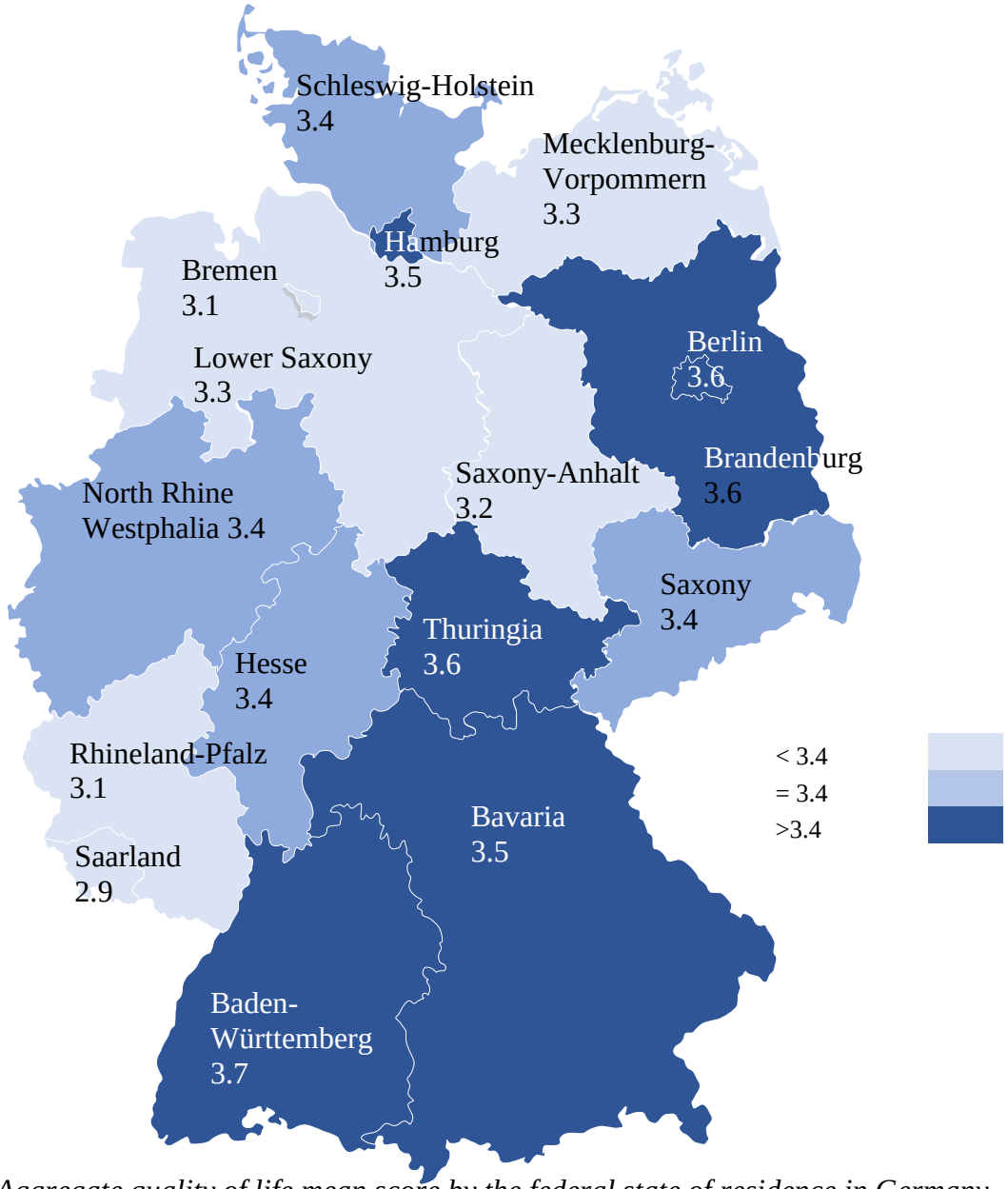

Figure 28: Aggregate quality of life mean score by the federal state of residence in Germany

3.7 Subjective Integration

Descriptive results from data on subjective integration reveal a sample from SSA migrants in Germany reported a mean score of 62.3, (SE 0.7, SD 16.2), a minimum score of 20 and a maximum score equal to 100. As shown in Figure 28 below, the categorisation of SSA migrants' subjective integration score shows that about 60 per cent of participants reported dissatisfaction with their integration in the German society; similarly, over one quarter rank their integration low.

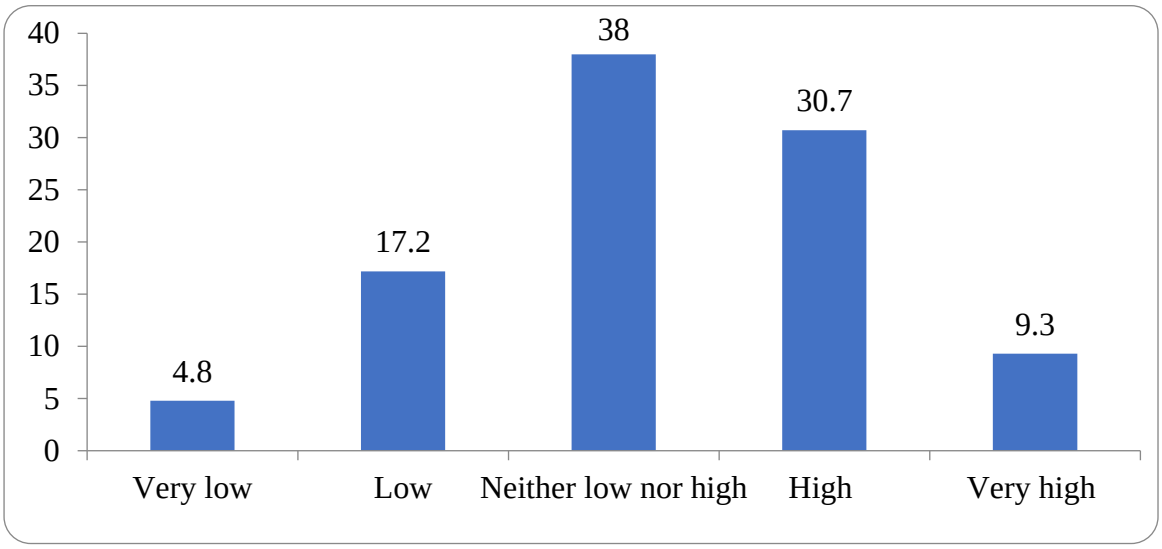

Figure 29: Percentage distribution of SSA migrants in Germany subjective integration score

An in-depth look into the distribution of items measuring subjective integration as presented in Figure 29 below, shows that only about 40 per cent of SSA migrants reported feeling highly welcome in Germany. About half of the sample population reported a high likelihood of recommending others to come to Germany - drawing from their personal experiences and observation. Less than one-quarter are satisfied with their income, while about 40 per cent reported satisfaction with their career situation. Only about half of the SSA migrants who participated in this study reported high satisfaction with general life in Germany.

Independent sample T-Test shows no significant difference in subjective integration score for male and female. Similarly, an analysis of variance (ANOVA) result reveals no significant difference by participants' age group. However, analysis of data on length of stay in Germany shows significant differences in subjective integration ($p<0.05$).

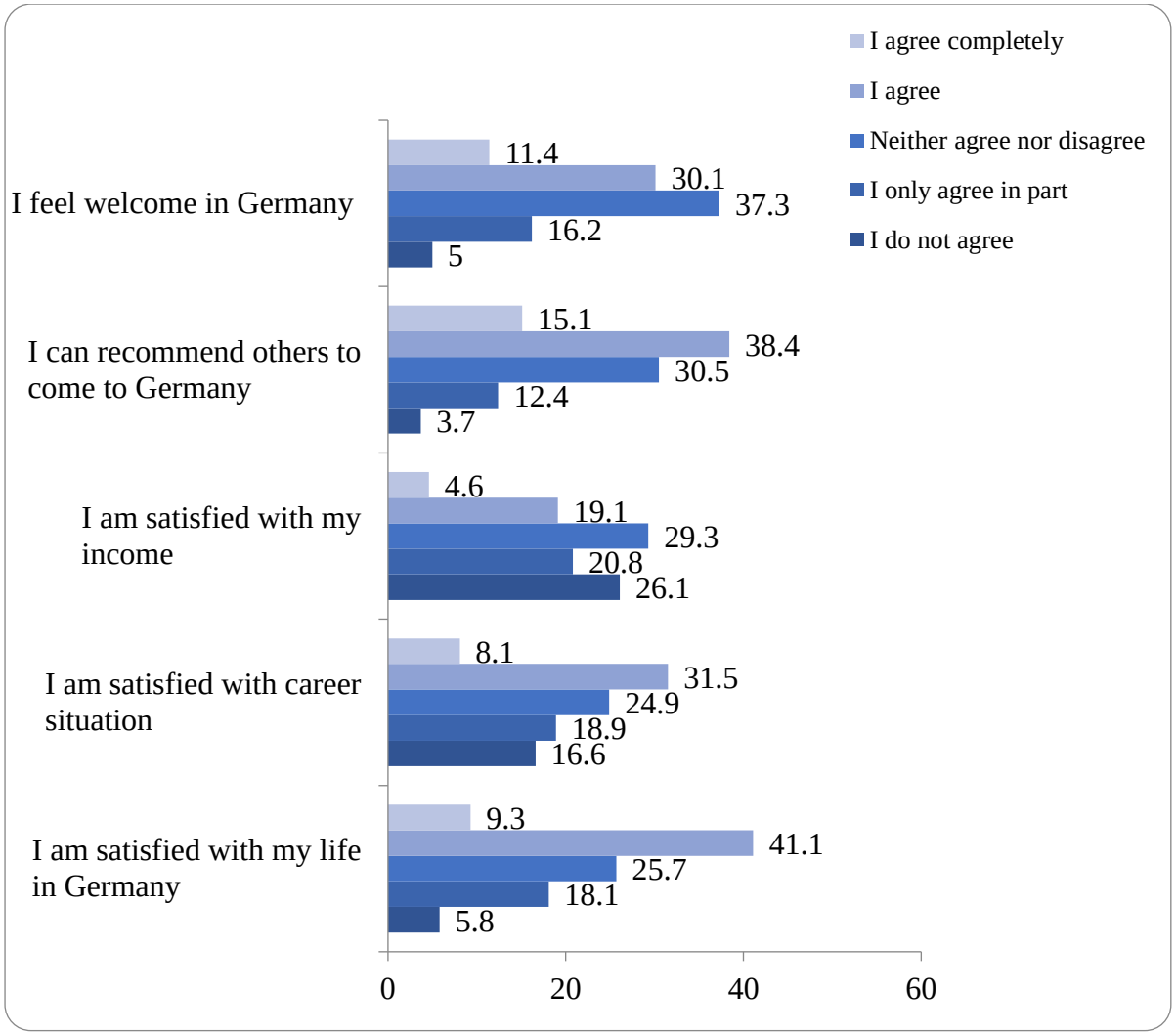

Figure 30: Percentage distribution of SSA Migrants measure of subjective integration by items

As shown in Table 13 below, close to 90 per cent of newly arrived SSA migrants in Germany (with the length of stay less than a year) reported a high subjective integration score. This number, however, falls drastically to 32 per cent for migrants residing in Germany for durations between one and three years. The percentage continues to decline (29 per cent) for migrants with intermediate stay (three to five years) in Germany. Similarly, data from SSA migrants with five to ten years of residence in Germany show that about 37 per cent reported high subjective integration and 43 per cent for SSA migrant participants living in Germany for over ten years.

Table 13: Subjective integration by age, gender, length of stay and German language skills for Sub-Saharan African migrants in Germany (N = 518)

		Categories for Subjective Integration					
		Very low	Low	Moderate	High	Very high	Total
Age Group	18 - 25	10	16	47	37	4	114
	26 - 35	8	52	90	79	42	271
	36 - 45	6	15	45	35	2	103
	46 - 65	1	6	15	8	0	30
Total		25	89	197	159	48	518
Gender	Female	14	40	82	81	18	235
	Male	11	49	115	78	30	283
Total		25	89	197	159	48	518
Length of stay in Germany?	Less than 1 year	0	1	1	10	6	18
	1 to 3 years	7	13	32	24	1	77
	3 to 5 years	2	18	36	20	3	79
	5 to 10 years	6	18	48	38	5	115
	More than 10 years	10	39	80	67	33	229
Total		25	89	197	159	48	518
German language skill	Not at all	1	2	4	1	0	8
	A little	5	17	44	45	21	132
	Average	8	31	60	37	6	142
	Well	5	19	40	35	6	105
	Very well	3	11	24	23	4	65
	Native	3	9	25	18	11	66
Total		25	89	197	159	48	518

Analysis of data on German language skills reveals a significant difference in SSA migrants' subjective integration score. Only one of the eight (12 per cent) participants with no knowledge of the German language reported high subjective integration. About half of those with "a little"

German language skill and 30 per cent of those with average German language competence reported high subjective integration. Close to 40 per cent who rated their German language competence as well and 42 per cent of those with very well or native competence reported higher subjective integration.

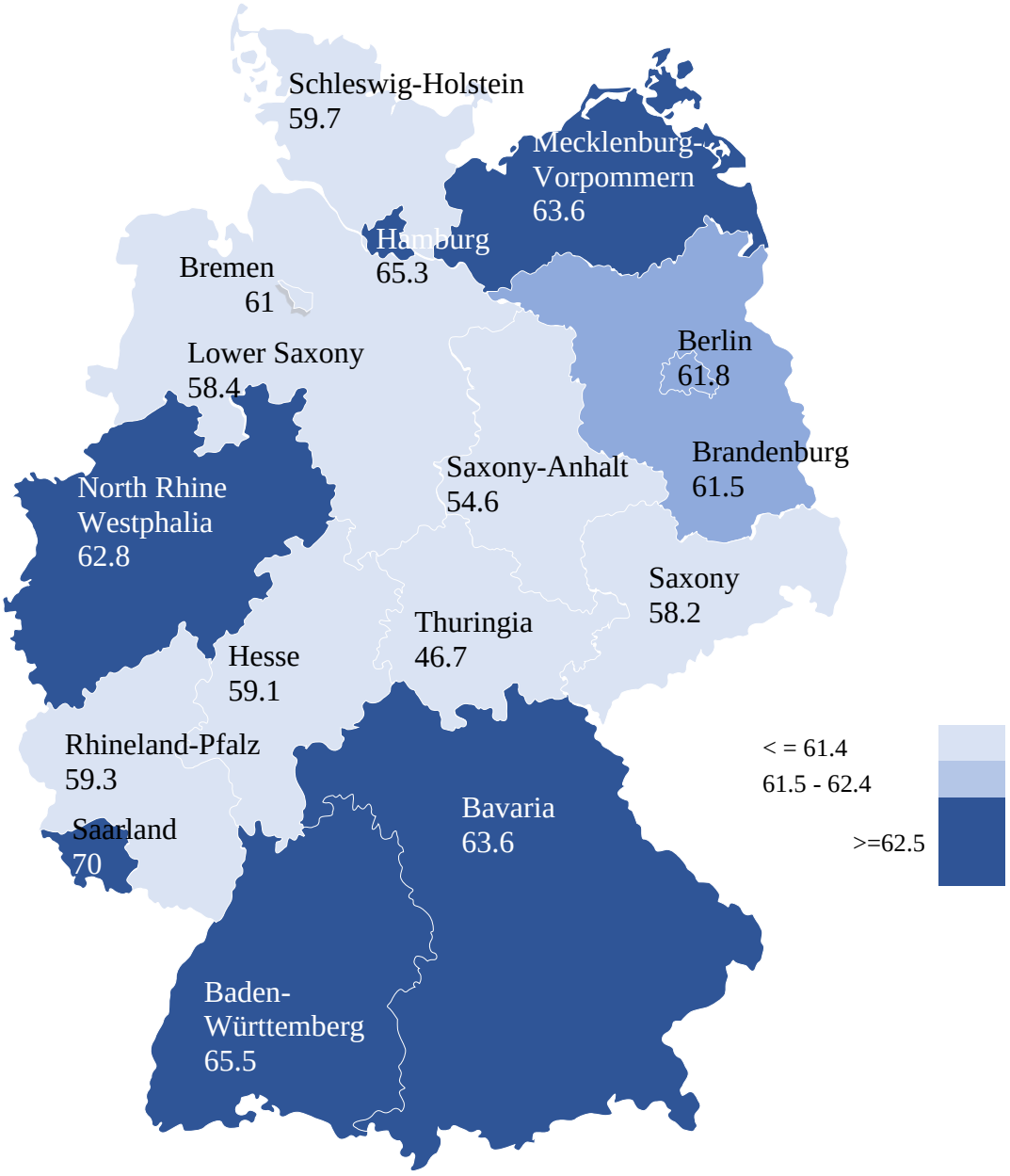

Figure 31: Sub-Saharan African migrants in Germany subjective integration distribution by the federal state of residence

As shown in Figure 30 above, SSA migrants sample living in Saarland reported the highest mean score (70); about eight points from the sample mean (62.2) for subjective integration in

Germany. Similarly, Baden-Württemberg, Hamburg, Bavaria, Mecklenburg-Vorpommern and North-Rhine Westphalia reported a mean score above the sample mean ranging from 65.3 in Hamburg to 62.8 in North-Rhine Westphalia. On the other hand, Berlin (61.8) and Brandenburg (61.5) reported mean score approximately equal to sample while, Bremen, Schleswig-Holstein, Rhineland-Pfalz, Hesse, Lower Saxony, Saxony, Saxony-Anhalt and Thuringia reported mean score below the sample mean ranging from 61 in Bremen to 46.7 in Thuringia.

3.8 Social Capital

Descriptive data on SSA migrant's social capital were analysed based on the two dimensions highlighted in the method section.

3.8.1 Structural social capital - Group membership

As presented in Figure 31 below, data on SSA migrants' structural dimension of social capital reveals that close to 30 per cent reported no membership in groups, networks, organisations or formally organised associations or groups of people who get together regularly to do an activity or talk about things. On the other hand, more than 50 per cent reported membership in one to three groups. However, about 5 per cent reported membership in more than five groups or networks while about 13 per cent reported membership in four to five groups or networks.

Further analysis of the effect of gender in this distribution shows no significant difference in performance for male and female. Similarly, results from ANOVA shows that region of origin and length of stay in Germany are not statistically significant for SSA migrant groups and network membership. On the other hand, analysis of age shows a significant effect on group membership.

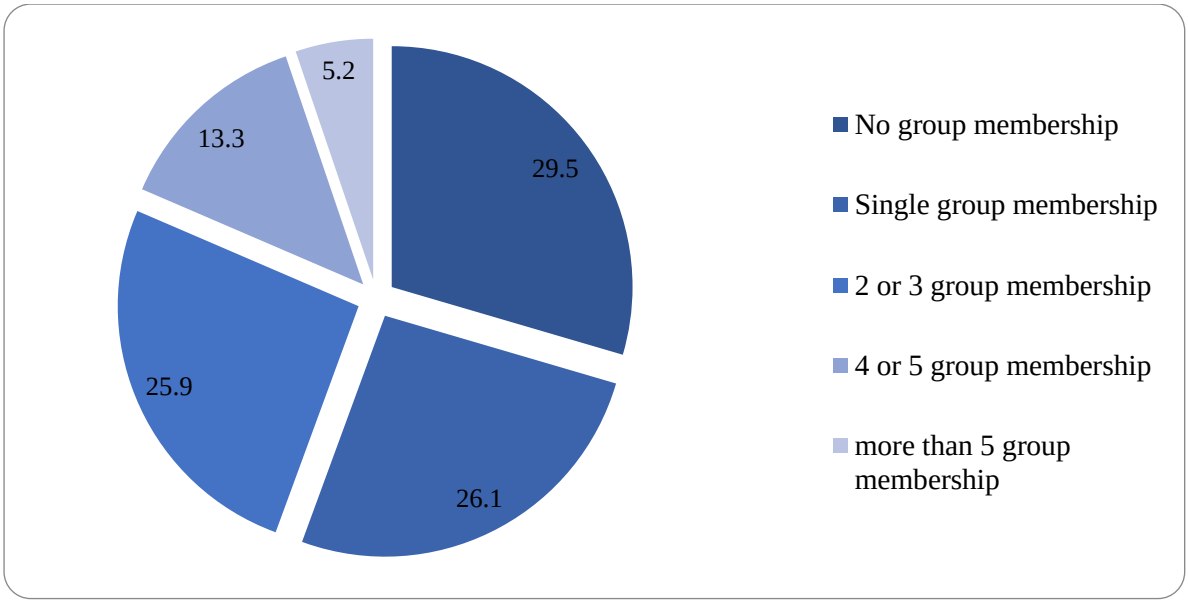

Figure 32: Sub-Saharan African migrants in Germany group and network density

Table 14 below, shows that about 21 per cent of SSA migrants participants aged 18 to 29 reported no membership in Groups, networks, organisation or association. This number increased to about 33 per cent for age 30 to 39 and 42 per cent for age 40 to 59. As the age increases, group membership reduces.

Table 14: Groups and networks density by age group for Sub-Saharan African migrants in Germany (N = 518)

		Age group				
		18 - 29	30 - 39	40 - 49	50 - 59	Total
Groups and network membership	No group membership	46	66	36	5	153
	Single group membership	67	46	17	5	135
	2 or 3 group membership	57	59	16	2	134
	4 or 5 group membership	38	16	15	0	69
	< 5 group membership	12	14	1	0	27
Total		220	201	85	12	518

3.8.2 Structural social capital - Group diversity

Analysis of data on group diversity for participants who reported at least one group membership (n = 365) shows that over half reported religious diversity for groups in which they are members. Similarly, 51 per cent reported ethnic and linguistic diversity among group member while less than half reported diversity in educational attainment for the groups and networks members. On the other hand, less than 14 per cent report occupational diversity in terms of career level or type of primary occupation while 15 per cent reported gender diversity among the group and network members. As shown in Figure 33, analysis of aggregate group diversity shows that about 10 per cent of participants with at least a group membership reported no diversity within the groups.

In contrast, about two-thirds reported low or very low diversity. About 18 per cent reported moderate diversity, while only 7 per cent reported high diversity within groups and networks.

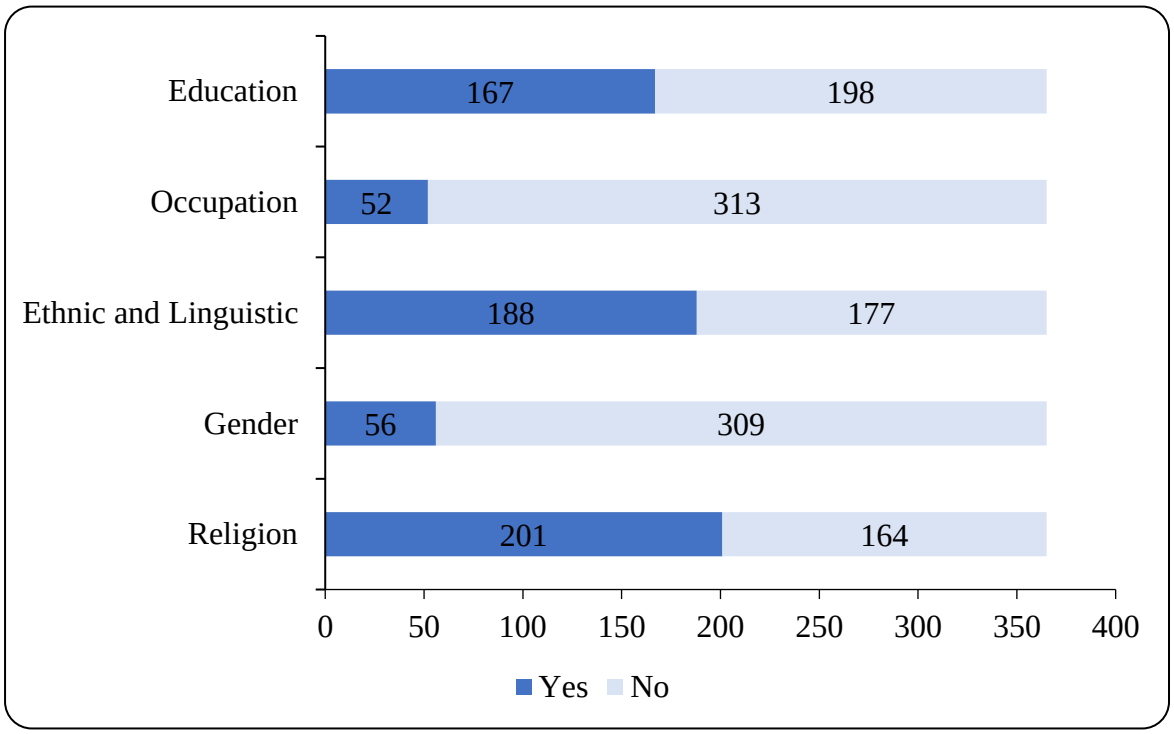

Figure 33: Frequency distribution of groups and networks diversity among Sub-Saharan African migrants in Germany

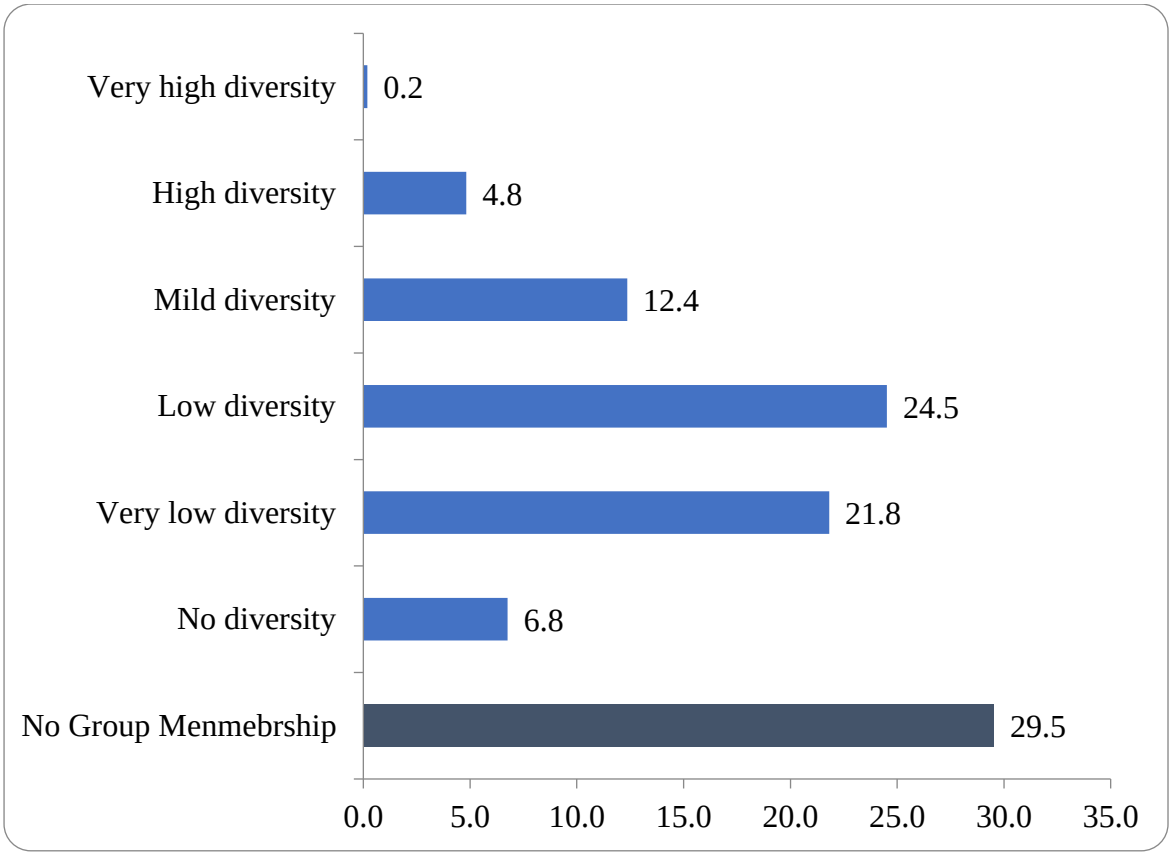

Figure 34: Percentage distribution of groups and networks aggregate diversity performance among Sub-Saharan African migrants in Germany

Gender and region of origin were not significant for the groups and networks diversity. Age, however, shows a significant effect on SSA migrants' group and network diversity distribution. As reported in Table 15 below, about 11 per cent of migrants aged 18 to 29 reported no diversity while about 64 per cent reported low to very low diversity. For the age group, 30 to 39, about 7 per cent reported no diversity, while, over 60 per cent reported low diversity. Similarly, 10 per cent of participants aged 40 to 49 reported no diversity in the group and network membership, while another 10 per cent reported high diversity among group members.

Table 15: Groups and networks diversity by age group for Sub-Saharan African migrants in Germany (N = 518)

		Age group				
		18 - 29	30 - 39	40 - 49	50 - 59	Total
Groups and network diversity	No Group Membership	46	66	36	5	153
	No diversity	20	10	5	0	35
	Very low diversity	50	40	20	3	113
	Low diversity	61	47	16	3	127
	Mild diversity	28	32	3	1	64
	High diversity	14	6	5	0	25
	Very high diversity	1	0	0	0	1
Total		220	201	85	12	518

3.8.3 Cognitive social capital – localised trust

As shown in Figure 34 below, data on localised trust reveals that about one-fourth of the total sample population reported "high" or "very high" localised trust. Half of the study participants describe their localised trust as "low" or "very low". Chi-Square analysis showed a significant gender difference ($p< 0.01$) in the distribution of localised for male or female. Close to 30 per cent of female SSA migrants reported at least high localised trust compared to less than 20 per cent among male. However, age and region of origin show no significant difference for SSA migrants' distribution of localised trust.

Table 16: Percentage distribution of Sub-Saharan African migrants' social capital and quality of life by gender (N = 518)

		Male	Female	p[a]
Localised Trust	Very low	28.1	14.8	**.000**
	Low	33.2	29.0	
	Neither nor	20.0	26.9	
	High	14.0	24.7	
	Very high	4.7	4.6	

[a] Significance of χ^2 by Gender

Consequently, Table 16 shows that over 60 per cent of the male participants described their localised trust as either low or very low. For female participants however, only about 43 per cent ranked their localised trust low or very low.

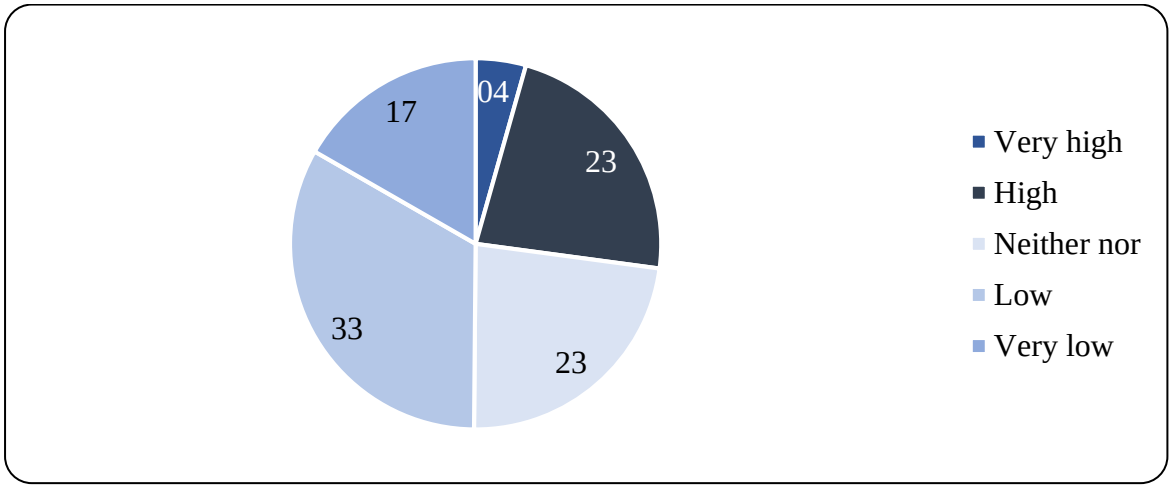

Figure 35: Localised trust percentage distribution for Sub-Saharan African migrants in Germany.

3.8.4 Cognitive social capital – centralised trust

As shown in Figure 36 below, data on centralised trust reveals about one-quarter of the total sample expressed "high" to "very high" trust in central representative. Similarly, half of the study participant reported low to very low centralised trust.

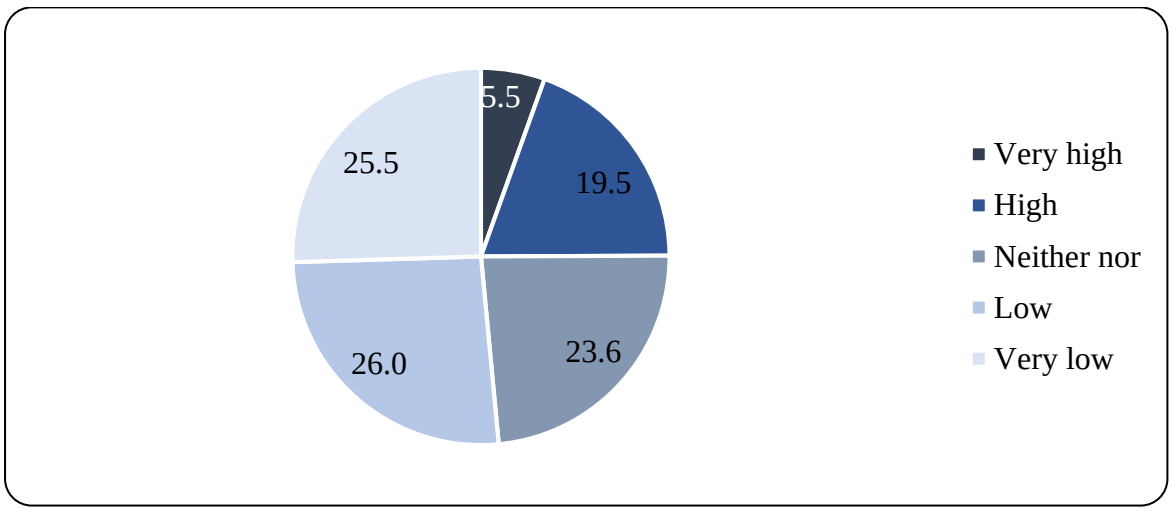

Figure 36: Centralised trust percentage distribution for Sub- Saharan African migrants in Germany

Analysis of demographic features as a predictor of centralised trust show no significant effects for age and region of origin in the distribution of centralised trust among SSA migrants in Germany. Chi-Square analysis showed a significant gender difference ($p< 0.01$) in the distribution of centralised trust.

Table 17: Percentage distribution of Sub-Saharan African migrants' social capital and quality of life by gender (N = 518)

		Male	Female	p[a]
Centralised Trust	Very low	37.4	23.7	**.000**
	Low	24.7	23.3	
	Neither nor	19.6	27.6	
	High	11.5	22.3	
	Very high	6.8	3.2	

[a] Significance of χ^{2} by Gender

As presented in Table 17 above, around 60 per cent of male SSA migrant participants reported low or very low trust in central representative compared to less than half of female participants. Similarly, a quarter of female reported high trust in central representative; about 8 points more than the male participants.

3.9 Quality of life and Subjective Integration

A Pearson product-moment correlation coefficient matrix was computed to check the extent and direction of the relationships between SSA migrants' socioeconomic and demographic characteristics such as age, educational attainment, length of residence, German language skills, primary occupation, approximate gross annual income, quality of life domains performance, and subjective integration. Further analyses were conducted to assess gender differences in these relationships. Results of this analysis are presented in Tables 19 for female and Table 20 for male.

Correlation analysis of the total sample (N= 518) presented in Table 18 shows moderate to strong correlation coefficient among the four quality of life domains. Physical health and psychological health domains reported the strongest correlation (0.72) while physical health showed moderate to strong correlation: 0.59 and 0.70 with social relationships and environmental domain, respectively. Psychological domain moderately correlates with social relationships (0.56) and strongly correlates with the environmental domain of quality of life. Similarly, data on aggregate quality of life show strong significant correlation with all domain of quality of life ranging from 0.73 for social relationship domain to 82 for psychological health domain.

As presented in Table 18, SSA migrants' subjective integration return moderate positive association with social relationship domain (0.30), physical health (0.35), psychological health (0.48) environmental domain (0.43) and aggregate quality of life (0.50).

Similarly, age shows weak to moderate negative correlation with all domains of quality of life and the aggregate quality of life performance for SSA migrants. Results from data on length of residence reveal a weak negative correlation with only psychological health domain and the aggregate quality of life performance. German language capability was not significantly correlated with any of the domains of quality of life, aggregate quality of life or subjective integration. On the other hand, analysis of data on educational attainment reveals weak to moderate association with all domains of quality of life, aggregate quality of life and SSA migrants' subjective integration. Primary occupation returned a weak positive association with physical health, psychological health, social relationships, and aggregate quality of life. Approximate gross annual income returns no correlation with any of the quality of life measures. However, it was positively and significantly associated with subjective integration.

The gender-specific analysis presented in Table 19 shows no significant association between length of stay and aggregate quality of life for female SSA migrants (N= 235). On the other

hand, Length of stay reveals positive weak significant associated with female social relationships and environmental domain of quality of life. Similarly, German language skill shows a weak positive association with social relationship domain while the reported positive association for physical health and education disappeared for female SSA migrants in Germany. Finally, for the female participants, the primary occupation was not significant for any domain or aggregate quality of life or subjective integration.

Pearson product-moment correlation coefficient matrix for male SSA migrants participant (N = 283) as shown in Table 20 reveals the length of stay has a negative-weak association with social relationship, environmental domain and aggregate quality of life. German language skill reported no significant direct association with any domain or aggregate quality of life or subjective integration. Education shows a moderate positive correlation with all domains and aggregate quality of life but returns no association with subjective integration for male participants. The primary occupation was moderately and positively associated with all domains of quality of life and aggregate quality of life for SSA migrants in Germany

Table 18: Correlation matrix for Sub-Saharan African migrants' quality of life, subjective integration and sociodemographic and economic features (N = 518)

		Quality of life domains											
		Physical health	Psychological health	Social relationships	Environmental domain	Quality of life	Subjective Integration	Age	Length of stay	German language skill	Education	Primary occupation	Gross annual income
Quality of life domains	Physical health	1											
	Psychological health	.726**	1										
	Social relationships	.587**	.562**	1									
	Environmental domain	.697**	.691**	.619**	1								
Quality of life		.813**	.824**	.736**	.814**	1							
Subjective Integration		.353**	.484**	.295**	.425**	.499**	1						
Age		-.237**	-.177**	-.116**	-.387**	-.215**	-.060	1					
Length of stay		-.027	-.106*	.017	-.033	-.090*	.034	.143**	1				
German language		.006	.011	-.080	.075	.026	.011	-.195**	-.058	1			
Education		.266**	.274**	.313**	.263**	.338**	.164**	-.041	-.102*	-.029	1		
Primary occupation		.134**	.119**	.091*	.067	.164**	.048	.012	-.081	-.016	.485**	1	
Gross annual income		.009	-.017	.045	-.045	.012	.100*	.361**	.303**	-.191**	-.016	.146**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 19: Correlation matrix for female Sub-Saharan African migrants' quality of life, subjective integration and sociodemographic and economic features (N = 235)

		Quality of life domains (WHOQOL)											
		Physical health	Psychological health	Social relationships	Environmental domain	EUROHIS Quality of life	Subjective Integration	Age	Length of stay	German language skill	Education	Primary occupation	Gross annual income
Quality of life domains	Physical health	1											
	Psychological health	.730**	1										
	Social relationships	.580**	.499**	1									
	Environmental domain	.691**	.660**	.624**	1								
Quality of life		.819**	.824**	.737**	.812**	1							
Subjective Integration		.393**	.540**	.309**	.433**	.566**	1						
Age		-.296**	-.226**	-.140*	-.488**	-.251**	-.107	1					
Length of stay		.097	-.038	.145*	.155*	.055	.010	.072	1				
German language		-.029	-.087	-.181**	.006	-.065	.010	-.200**	.006	1			
Education		.119	.211**	.254**	.178**	.268**	.235**	-.048	.009	-.146*	1		
Primary occupation		-.011	.020	.046	-.053	.070	.051	.078	-.067	-.101	.451**	1	
Gross annual income		.009	-.017	.045	-.045	.012	.100*	.361**	.303**	-.191**	-.016	.146**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 20: Correlation matrix for male Sub-Saharan African migrants' quality of life, subjective integration and sociodemographic and economic features (N = 283)

		Quality of life domains (WHOQOL)											
		Physical health	Psychological health	Social relationships	Environmental domain	EUROHIS Quality of life	Subjective Integration	Age	Length of stay	German language skill	Education	Primary occupation	Gross annual income
Quality of life domains	Physical health	1											
	Psychological health	.730**	1										
	Social relationships	.593**	.623**	1									
	Environmental domain	.705**	.733**	.615**	1								
Quality of life		.810**	.828**	.742**	.829**	1							
Subjective Integration		.323**	.434**	.286**	.423**	.450**	1						
Age		-.206**	-.178**	-.089	-.297**	-.228**	-.037	1					
Length of stay		-.110	-.137*	-.080	-.194**	-.165**	.062	.320**	1				
German language		.039	.104	.019	.158**	.099	.007	-.260**	-.073	1			
Education		.374**	.312**	.384**	.368**	.378**	.114	-.156**	-.076	.018	1		
Primary occupation		.247**	.187**	.140*	.188**	.222**	.039	-.128*	-.021	.031	.473**	1	
Gross annual income		.016	-.018	.051	-.022	-.012	.183**	.355**	.348**	-.332**	-.106	.034	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Results from a multiple linear regression using the stepwise method shows only age, education, and gender returned a significant effect on the association with at least one of the four domains of QoL. Other socioeconomic and demographic variables (German language skills, primary occupation, length of stay, residence status and region of origin) were then excluded from the regression model due to non-correlation.

Table 21: Regression analysis of SSA migrants' quality of life (WHOQOL) domains and socioeconomic and demographic characteristic (N = 518).

	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*

As shown in Table 21 above, subjective integration shows weak to strong association with all four dimensions of quality of life (Physical health: B = 0.24 P < 0.001, Psychological health B = 0.38 P < 0.001 Social relationship B = 0.15 P < 0.001, Environmental domain B = 0.26 P < 0.001). Similarly, educational attainment was significant for all dimensions of quality of life. Age, as a demographic variable, was significant for physical and psychological health as well as the environmental domain while gender only has a significant effect on the social relationship dimension of SSA migrants' quality of life.

The R Square for the final models ranged from 0.13 to 0.27. The regression model shows that changes in subjective integration, age and education account for about 18% (SE 3.8) variance in physical health, 25% (SE 3.5) changes in psychological health, and about 28% (SE 3.9) changes in the environmental domain of quality of life. Similarly, subjective integration, gender and education account for 13% (4.4) variance in the social relationship domain of quality of life.

3.10 Quality of life and social capital

The extent and direction of the relationships between SSA migrants' socioeconomic and demographic characteristics, structural and cognitive social capital and quality of life performance were examined using a Pearson product-moment correlation coefficient matrix (see Table 22). Structural social capital – as measured by the group and network membership and diversity – show a weak positive association with SSA migrant participants' quality of life performance. Similarly, cognitive social capital – measured by localised and centralised trust – reported a weak positive association with aggregate quality of life. Age shows a weak negative association with the group, network diversity and density as well as the centralised trust measure of cognitive social capital. Consequently, age returns no significant association with localised trust. In addition, the length of stay in Germany was not significantly associated

with structural social capital and cognitive social capital was negatively associated with the SSA migrants' length of stay in Germany.

Similarly, German language skill was not associated with structural social capital but returned weak positive significance for localised trust measure of cognitive social capital. Following the same pattern, the correlation analysis shows that education was only associated with structural social capital through group diversity and has no significant association with cognitive social capital. Finally, socioeconomic data on primary occupation was not at all associated with SSA migrant's participant social capital while income returned positive association with localised trust.

3.11 Quality of life, social capital and subjective integration

Pearson product-moment correlation coefficient matrix was computed to examine the association between the four domains of quality of life (WHOQOL), aggregate quality of life (EuroHisQol8), subjective integration and dimensions of social capital. As presented in Table 23 below, subjective integration returned no significant association with group and network density and low association with group and network diversity. On the other hand, both measures of cognitive social capital moderately correlates with subjective integration. Similarly, physical health, psychological health, and environmental domain of quality of life show weak to moderate significant association with measures of structural and cognitive social capital. Social relationship domain of quality of life, however, was positively associated with group and network diversity and localised trust but no significant association was established with centralised trust.

Table 22: Correlation matrix for female Sub-Saharan African migrants' quality of life, subjective integration and sociodemographic and economic features (N = 235)

	EUROHIS Quality of life	Group and network density	Group and network diversity	Centralised trust	Localised trust	Age	Length of stay	German language	Education	Primary occupation	Approximate gross annual income
EUROHIS Quality of life	1										
Group and network density	.205**	1									
Group and network diversity	.231**	.614**	1								
Centralised trust	.262**	.141**	.147**	1							
Localised trust	.228**	.076	.128**	.838**	1						
Age	-.215**	-.173**	-.170**	-.095*	-.051	1					
Length of stay	-.090*	-.017	-.012	-.168**	-.189**	.143**	1				
German language	.026	.053	-.015	.055	.088*	-.195**	-.058	1			
Education	.338**	.074	.137**	.038	.065	-.041	-.102*	-.029	1		
Primary occupation	.164**	.025	-.021	.018	.004	.012	-.081	-.016	.485**	1	
Gross annual income	.012	-.075	-.079	-.078	.118**	.361**	.303**	-.191**	-.016	.146**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed)

Table 23: Correlation matrix for Sub-Saharan African migrants' quality of life, subjective integration and social capital (N = 518)

			Quality of life domains (WHOQOL)						Dimensions of Social capital			
									Structural social capital		Cognitive social capital	
			Physical health	Psychological health	Social relationships	Environmental domain	EUROHIS Quality of life	Subjective Integration	Group and network density	Group and network diversity	Centralised trust	Localised trust
Quality of life domains		Physical health	1									
		Psychological health	.726**	1								
		Social relationships	.587**	.562**	1							
		Environmental domain	.697**	.691**	.619**	1						
EUROHIS Quality of life			.813**	.824**	.736**	.814**	1					
Subjective Integration			.353**	.484**	.295**	.425**	.499**	1				
Dimensions of social capital	Structural social capital	Group and network density	.101*	.142**	.138**	.233**	.205**	.050	1			
		Group and network diversity	.132**	.178**	.150**	.256**	.231**	.111*	.614**	1		
	Cognitive social capital	Centralised trust	.121**	.358**	.065	.238**	.262**	.321**	.141**	.147**	1	
		Localised trust	.146**	.302**	.101*	.171**	.228**	.232**	.076	.128**	.838**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The measurement model testing the hypothesized links between the latent variables (cognitive social capital (CSC), structural social capital (SSC), and quality of life) and their observed indicators had an acceptable fit, with $\chi2(51) = 254.90$, $p < .01$; $\chi2/df = 5.00$; CFI = .91; RMSEA = .09 ($p < .01$; 90% CI = .08/.10); and SRMR = .05. The inspection of modification indices suggested that the pairs of items 1-2, 1-4, 2-3, and 4-7 of the EUROHIS-QOL 8-item Index might be correlated. Because the EUROHIS-QOL is a unidimensional instrument that provides a global index of quality of life, these modifications were included in the measurement model. The modified model had a good fit, with $\chi2(47) = 157.60$, $p < .01$; $\chi2/df = 3.35$; CFI = .95; RMSEA = .07 ($p = .007$; 90% CI = .06/.08); and SRMR = .04 which was significantly better than the original model with $\Delta\chi2(4) = 97.30$, $p < .001$. All observed indicators presented good factorial validity with standardized regression weights above the threshold of .50 (except for item 2 of the EUROHIS-QOL 8-item Index, with $\lambda = .42$) and were statistically significant. In addition, the construct reliability of the latent variables was good for CSC (CR = .92) and for QoL (CR = .84), and satisfactory for SSC, with a composite reliability value of .67. Weak to moderate associations were found between the latent variables CSC and SSC which were positively associated with each other ($r = .22$, $p < .01$) and with QoL ($r = .32$, $p < .01$ and $r = .28$, $p < .01$, respectively).

The Structural Model

As presented in Figure 36, the structural model testing the direct effects of CSC and SSC on quality of life had a good fit, with $\chi2(47) = 157.60$, $p < .01$; $\chi2/df = 3.35$; CFI = .95; RMSEA = .07 ($p = .007$; 90% CI = .06/.08); and SRMR = .04 and explained 15% of the variance in QoL. Significant direct effects of CSC and SSC were found on quality of life, with $\beta = .27$, $p < .01$ and $\beta = .23$, $p < .01$, respectively.

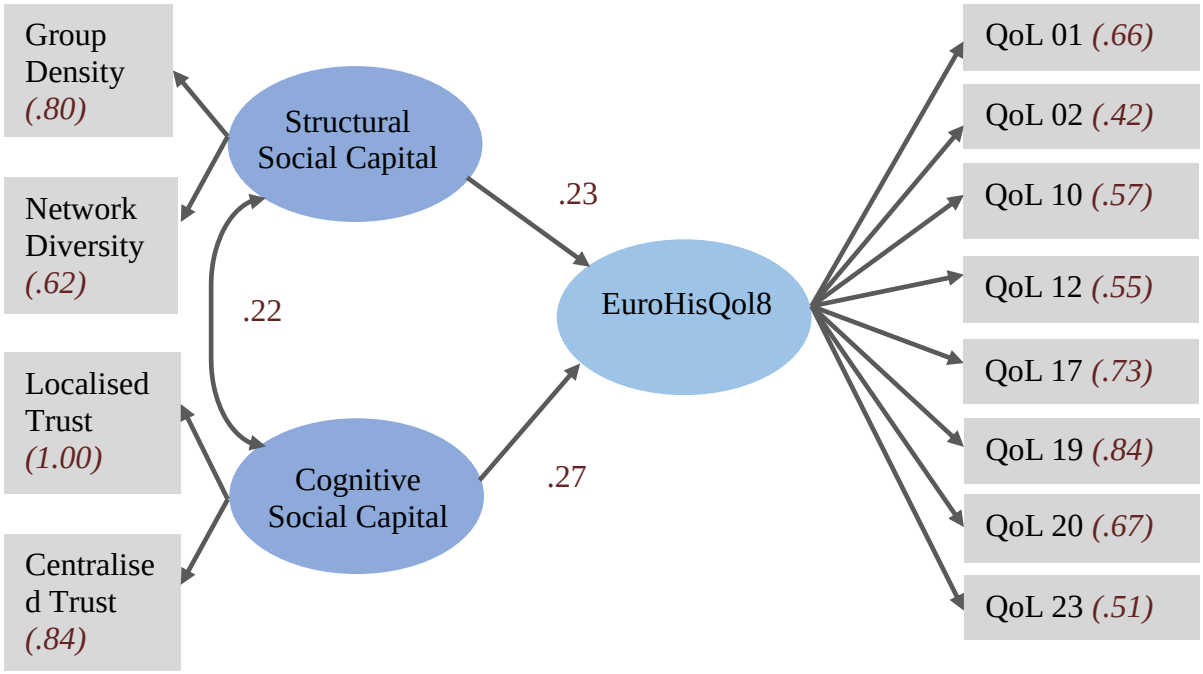

Figure 37: The Structural Model, social capital and quality of life for Sub-Saharan African migrants in Germany

The results from multi-group analyses for gender (male vs female) and German language skill (not at all to average vs well to native) compare the unconstrained model with the nested models in which factor loadings and structural weights were sequentially and cumulatively fixed to be equal across groups. Regarding measurement invariance, the factor loadings of the observed indicators on their respective latent variables did not significantly differ between males and females ($\Delta\chi2(9) = 14.36$, $p = .11$) or between low-average and good-native German language skills ($\Delta\chi2(9) = 9.53$, $p = .39$). Assuming the measurement model is invariant across groups, the results from the multi-group analyses also yielded no significant differences in the structural weights across genders ($\Delta\chi2(2) = 5.46$, $p = .07$) or German language skills levels ($\Delta\chi2(2) = 2.27$, $p = .32$) (see Table 23).

Table 24: Multi-group analyses testing measurement and structural invariance across genders and German language skills groups (N = 518).

	χ^2	*df*	CFI	RMSEA [90% CI]	SRMR	$\Delta\chi^2$	Δdf	ΔCFI
Gender								
Summary of fit statistics								
Male	139.86**	47	.93	.08 [.07/.10] **	.05			
Female	174.70**	47	.88	.11 [.09/.13] **	.07			
Multi-group analyses								
Unconstrained model	314.59**	94	.91	.07 [.06/.08] **	.05	-	-	-
Measurement weights	328.95**	103	.91	.07 [.06/.07] **	.05	14.36	9	< 0.01
Structural weights	334.40**	105	.91	.07 [.06/.07] **	.05	5.46	2	< 0.01
German language skills								
Summary of fit statistics								
Not at all – average	160.97**	47	.91	.09 [.08/.11] **	.06			
Well - Native	102.00**	47	.95	.07 [.05/.09] *	.05			
Multi-group analyses								
Unconstrained model	262.96**	94	.93	.06 [.05/.07] *	.06	-	-	-
Measurement weights	272.49**	103	.93	.06 [.05/.07]	.06	9.53	9	< 0.01
Structural weights	274.75**	105	.93	.06 [.05/.06]	.06	2.27	2	< 0.01

* $p \leq 0.05$; ** $p \leq 0.01$.

4 DISCUSSION

In the presented analysis, the performance and relationship between various measures of quality of life, subjective integration and social capital of SSA migrants' group in Germany were examined. With the available data, migrant features such as German language skills, length of stay, residence status as well as various sociodemographic and economic factors were included in the analysis. Cognitive social capital, structural social capital and subjective integration show significant positive effects on the quality of life. Similarly, some observed socioeconomic and demographic features such as education, age, and gender were significant for SSA migrants' quality of life performance in Germany. To better interpret the observed associations and distributions, it is crucial to first explore the validation of the sampling method and examine the socioeconomic, demographic distribution, SSA migrants' features, as well as their performance in the various domains of quality of life measures in Germany.

4.1 Methodological contribution: 5-wave-approach

The sample distribution, according to demographic characteristics, shows that the 5-wave-approach used to recruit sample in this study produced a sample that reflects SSA population characteristics, as presented in the 2016 German Foreign Population Report (GFPR). The average age of participants in the Social Capital and Quality of Life (SCQOL) survey (32.5 years) mirrors information provided in the GFPR 2016 with about 2.2 years variation. This slight variation is assumed to have resulted from the 18 years minimum age restriction set for participating in the SCQOL survey while the GFPR data includes data from all SSA migrants, including children.

Similarly, both data sets show a comparable pattern in the gender distribution; projecting a male majority of about 61 per cent and 63 per cent for SCQOL and GFPR, respectively. Results on the marital status returned an observable difference in the distribution of data on marital

status mainly limited to the categorisation of single and those in partnerships but not married. Arguably, this difference in the distribution for SCQOL survey and the GFPR resulted from the understanding and interpretation of the two terms: “single” and “in partnership but not married”. These two terms are believed to have different implications in formal and social settings. Since the GFPR is an official government report (contrary to the SCQOL survey which was a social survey), respondents who are not in a formal matrimonial union are assumed to be more likely to report “single” as their marital status (Weaver, 2000) even when in an unmarried relationship. However, when recategorising this data into married, not married, divorced, or windowed the observed differences in marital status distribution between both datasets disappear. The new marital status distribution projects an overwhelming similarity that further supports the representativeness of the SCQOL data for SSA migrants in Germany.

In order to match data from the 2016 German foreign population report, country of origin variable from the SCQOL questionnaire was collapsed to form a new variable ‘region of origin'. The region West Africa, including Nigeria, Ghana, and Togo recorded the highest percentage followed by Eastern Africa, Central Africa, and last Southern Africa. Similar trends were reported in the GFPR 2016 where West Africa accounted for close to half of SSA migrants’ population followed by Eastern Africa, Central Africa, and Southern Africa. Sample distribution among the sixteen federal states in Germany projects disparity in the distribution for SSA migrants’ states of residence for SCQOL survey and GFPR 2016. These differences in distribution are believed to have partially resulted from SSA migrants’ constant internal movement in search of contact with other migrants with similar ethnic, cultural, and common linguistic characteristics (Deng, 1997).

Similarly, the different migrant experience across the sixteen federal states is believed to encourage SSA migrant’s internal movement fuelled by a desire for social inclusion, better

socioeconomics or opportunities for the future. Equally, the adaptation of the 5-wave-approach sampling technique is assumed to have contributed to the discrepancy in state of residence distribution for SCQOL survey and GFPR. The systematic approach (wave 4) for data collection involving strategic recruitment of participant was more intensively applied in some states than others. For example, in Hamburg - where about 15 per cent of survey participants were recruited - more Afro stores, groups and associations, social and professional networks were contacted thereby increasing the chances of participation in this state.

In general, the comparability of socio-demographic characteristics of the participants of the SCQOL survey and data from the German Foreign Population Report (GFPR) confirm the representativeness of the sample and the effectiveness of the 5-wave-approach sampling design as a valid method to approximate a random sample of Sub-Saharan African migrants in Germany. This approach, although very cumbersome, considered the heterogeneity of many Sub-Saharan African cultures, geographical dispersion of SSA migrants alongside network formation and usage. The larger sample size is assumed to foster participation and facilitate a more representative sample by state of residence. Generally, the step-by-step approach makes this method a straightforward and adaptable tool to generate a representative sample from other hard to reach populations.

4.2 SSA migrants' living situation and population features

The results on age composition, gender, marital status, region of origin and state of residence in Germany presents a rare overview of the life and dynamics of the SSA migrant group within the German society. Arguably, the relatively young migrant group reflects the age distribution in most Sub-Saharan countries where the birth rate has remained high and the labour force age (18 - 35 years) continues to grow drastically over the past decade (World Bank, 2017).

The increasingly limited capacity of the public and private sector to provide viable employment opportunities for the rapidly growing labour force has resulted in large numbers of unemployed youths looking for opportunities in better economies abroad (often in Germany and other countries in neighbouring continents with seemingly better opportunities for the future) (Aderanti Adepoju, 2003). However, the process of migrating to European countries from Sub-Sahara African countries is especially challenging and more manageable for younger Sub-Saharan Africans (Triandafyllidou & Maroukis, 2012). In addition to this, the general social roles and related concepts, such as having a sense of purpose, have been described by older migrants as core components of their health and well-being (Iliffe et al., 2010). Consequently, it is essential to note that, older Sub-Saharan African migrants, from cultures where age is considered beneficial, and a crucial determinant of one's position in the society (Adeboye, 2007), are more likely to return to their home country as the age-advantage may be lost in migration (Gele & Harsløf, 2012 p5). Younger migrants in active labour force years are left behind to continue the diaspora remittance culture as a means for family maintenance and support (Richmond Tiemoko, 2004).

Among the many other factors that shape migration, gender is often identified as having a significant impact on migration motivation, decision and experience especially for migrants from economically less developed countries (Palriwala & Uberoi, 2008). The seemingly rigorous migration process, societal structure and traditional role division – where men are regarded as providers and women as caregivers (Ngubane, 2010) – implies, that younger male Sub-Saharan Africans assumed to be most capable of going through the laborious migration process and succesfully integrating into the labour market in host countries are sent or supported to travel to Germany to work and pursue better opportunities for the future for themselves and the family back home.

The high proportion of unmarried SSA migrants in Germany is believed to be a consequence of the relatively younger age of the migrant group. Also, institutional regulation is believed to make it difficult and sometimes impossible for many SSA migrants to get married in Germany. In most cases, SSA migrants wishing to get married will either endure the time and cost demanding process in Germany (that includes a background check in the country of origin), travel to neighbouring countries where the process is cheaper and more comfortable, or to their country of origin (Auswärtiges Amt, 2019). These complications, coupled with poor socioeconomic performance, are believed to discourage marriages among the SSA migrant group in Germany.

Although East Africa has the highest regional population in Africa, the result shows that the number of migrants from this region falls behind those from West Africa. This trend is believed to have resulted from West Africa's high unemployment rates, relatively low wage rates, political instability and conflict, and the prospects of economic, social and environmental stability as a means of improving personal life in Europe and notably Germany (Afifi, 2011; Zimmermann, 1996).

Sub-Saharan African migrant socioeconomic status distribution

The percentage of SSA migrants that have completed a university education is somewhat higher in comparison to the Sub-Saharan Africa region average educational level (Bloom, Canning, & Chan, 2006). The reported high educational attainment is believed to reflect SSA migrants' perceived challenge of adapting to a new and very different socioeconomic and institutional setting, as well as the labour needs and requirement of Germany as the host country. This implies that only those who are "qualified" or "deemed-fit" to participate in the German productive workforce are "allowed" or able to migrate to Germany (Adams, 2003; Kalipeni, Semu, & Mbili zi, 2012). Similarly, the progressive increase in the number of

younger SSA migrants in Germany for studying, educational advancement or new vocational training – as a means of joining the productive workforce or improving their general opportunity for the future – supports the reported high education attainment among SSA migrant group.

Studies on the adaptation of African migrants in some other European countries (for example, United Kingdom) have suggested that the reality of long adaptation process highlighted by individual or institutional discrimination and barriers, makes it hard for many SSA migrants to be integrated into the labour market and to take up jobs corresponding to their educational attainments (Schunck, Reiss, & Razum, 2015). This poor performance is evident in SSA migrants reported primary occupation and the attendant disparity with educational attainment. The gap in qualification and occupation is believed to be - to no small extent - facilitated by the high rate of unrecognised educational attainment among SSA migrants, language barrier, institutionalised barrier or discrimination. After arriving in Germany, SSA migrants are expected to apply for the recognition of qualification received in the country of origin. However, only very few do so, or successfully have their qualification recognised (for instance, only 285 SSA migrants applied for degree recognition in Germany in 2017) (Federal Ministry of Education and Research, 2019).

This low rate is assumed to result from the lack of awareness and the expected complexity in the process which entails the assessment of the educational institution where the qualification is received, as well as the degree received. It is assumed that many SSA migrants view this process as rather long and unnecessary since applicants from this region are often required to complete extra or new training and the recognition does not address other major barriers posed by the German language competence or discrimination that influences their competitiveness in the job market. Although more than half of the SSA migrants in this study reported having completed university education, close to 60 per cent are employed in jobs below their

qualification level with about 40 per cent working elementary jobs such as cleaning, machine operation, or commissioning in logistics.

Similarly, result from SSA migrants' income shows that over half reported annual gross income below 15,000.00 Euro, that is, a little over half of Germany average income (Bach, Corneo, & Steiner, 2009). This low income is believed to stem from the kind and level of employment available for SSA migrant groups and their inability to engage in full-time jobs due to unavailability of such opportunity, individual capability or institutional regulation (for example work restriction attached to specific residence permits) (Bessey, 2012) as well as wage discrimination (Velling, 1995).

Sub-Saharan African migrants: Migration and Residence

Results from SSA migrants' migration expectation and experiences explore participants' reasons for migration, length of planned stay in Germany, length of current stay and residence status. As presented in the results section, the general opportunity for the future was ranked the most substantial reason for migration. This migration factor can be well related to the poor economic welfare in many SSA countries and the desire for a better standard of life. In a report by the IOM, it was reported that for most migrants, migration is the most effective way for them to have better opportunities (IOM, 2013a).

Results show that about 85 per cent of study participants hope to return home at some point in time. This finding agrees with results from international studies on migration that confirm that the majority of migrants tend to return to their country of origin after the intended reason for migration is achieved or when they grow older than the productive work age (Ahlburg & Brown, 1998). More precisely, SSA migrants' decision to return to the country of origin is believed to be influenced by age, integration in the host community, behaviour in the labour market, established or maintained professional or personal connection in home countries, as well as overall socio-economic achievements (Richmond Tiemoko, 2004). From observation,

however, many of the SSA migrants in Germany that decided to return home did so after acquiring a degree or training that gives them an advantage in the labour market in their home country, or after setting up business (small or large scale) to support livelihood in home country. Also, the decision to return home was influenced by limited ability to participate in labour market due to old age or illnesses, or inability to cope with the different social, economic and institutional settings in Germany.

The length of current stay and residence status show that about 60 per cent have spent at least five years in Germany while close to half have residence status that requires regular renewal. Although the length of stay in Germany is one of the factors that determines the residence status, the political complication and interpretation of these two limit the interpretation of the result from SSA migrants in this study. However, it is clear, that the uncertainty on the allowed stay might have an indirect or direct consequence for the inclusion, health, and socioeconomic performance of this migrant group.

Language skills

Although about three-quarters of SSA migrants reported average to native competence of the German language, results on the distribution of usage and language requirement depict SSA migrants as a group with relatively low utilisation of the German language; more than half rarely or never speak German at home or with friends. This trend is believed to be due to SSA migrants' family of network formation that mostly borders around ethnicity and linguistic or cultural identity (Aldous, 1962). In many cases, SSA migrants have existing contacts in Germany that share the same cultural value, or ethnicity. These contacts often form the basis for the formation of new friendships and networks where the German language is rarely used. The German language is, therefore, mostly used for economic activities that include work or learning. This conclusion is further consolidated by results on German language requirement for current occupation. About 70 per cent and 75 per cent require some written and verbal

language skill respectively for the performance of their current primary occupation. Other studies on immigrant language learning habits (Duchene, Moyer, & Roberts, 2013) also confirm that economic gain through skill acquisition and labour market participation is the primary drive for immigrants' host language learning behaviour.

4.3 Subjective representation of SSA migrants social and life performance in Germany

SSA migrants reported poor quality of life scores, below the Norm population mean score across all domains (Hawthorne et al., 2006). Records of physical pain, need for medical treatment, and inability to perform daily tasks characterise the group's low physical health domain score. Similarly, the poor psychological domain score reflects the low concentration, high negative feelings and low self-esteem among SSA migrants. For the social relationships domain, poor personal relationships and dissatisfaction with sex life contributed to low performance in this domain. Finally, the low environmental domain score is a result of neighbourhood safety concerns, unhealthy physical environment, unmet financial needs, dearth of opportunities for acquiring new information and skills, and fewer opportunities for recreation and leisure activities

These highlighted phenomena reported by the SSA migrants sample had been established as factors that negatively impact the domain performance of quality of life in other studies among various migrant groups (Gobbens & van Assen, 2014; Grødem, 2009; Park, Turnbull, & Turnbull III, 2002). From the presented results, younger SSA migrants are shown to report a higher mean score in all domains of quality of life. This trend among SSA migrants agrees with findings from other studies where age was significant for migrants' physical health performance (Belloc & Breslow, 1972; Shephard, 1997), psychological health (Carlson & Steuer, 1985; Jackson & Warr, 1984; Layte, Sexton, & Savva, 2013), social relationships (Goodwin, 2006) and environmental domain of quality of life (Rantakokko et al., 2010). The

age effect on physical health performance is not surprising considering the biological advantage of a younger age in terms of physical strength and broader access to information (Landers, Hunter, Wetzstein, Bamman, & Weinsier, 2001). As pointed out by Mantwill & Schulz (2017) in their research on health literacy and healthcare utilisation among immigrants and non-immigrants in Switzerland, younger migrants are generally considered to be more informed and engaged in activities that promote health and well-being. Similarly, younger SSA migrants in Germany are assumed to experience less pain, have better work capability, mobility and more energy for daily activities. One could also argue that the younger SSA migrants are more socially inclined and informed – through the use of social media – on valuable information on the health care system and services aimed at promoting overall physical health.

Similarly, the physical health advantage for younger SSA migrants is believed to enhance better performance in psychological health for this age group. As anticipated, younger SSA migrants reported better concentration, lower negative feelings and better self-esteem assumed to result from better access to health-promoting information (through social media and networks) and broader contact to the general German community. Due to the lack of evidence on the role of culture in the association between age and psychological well-being, one can only speculate about how Sub-Saharan Africa's distinct family-oriented culture influences SSA migrants' psychological health. From observation, it is believed that older SSA migrants are disadvantaged in the psychological domain of quality of life due to rising expectations from family members back in the home country and the need to maintain the traditional family role that accompanies older age.

Correspondingly, younger age was significant with SSA migrants' better performance in social relationships and environmental domain performance of quality of life. Younger SSA migrants are more likely to experience better personal relationships and satisfaction with their sex life.

Contrary to evidence that suggests positive association between age and social relationships (Luong, Charles, & Fingerman, 2011), SSA migrants' reverse association is believed to be furthered by general change in social connections (through social media and interactions) and the progressively widening gaps in relationships and social contact with family and friends in country of origin as a results of migration. Delineating the mechanisms at work in this phenomenon, younger SSA migrants are believed to adapt faster and form new friendships and networks that promote social relationships and facilitate environmental quality of life through access to information, recreation and leisure activities (e.g. youth social media groups, African groups on social media) and opportunities for learning new skills. On the other hand, as shown in the results for network diversity, older SSA migrants are more exclusive (in terms of ethnicity, language and culture, gender, educational attainment and economic class) in the formation of networks and therefore limited in access to information that facilities environmental domain of quality of life.

Quality of life and state of residence in Germany

While the pattern in SSA migrants' quality of life performance is spread unevenly between West and the East German federal states, it is clear that participants from the southernmost states reported convincingly high aggregate quality of life. Baden-Württemberg reported the highest mean score in aggregate quality of life distribution and scores above the upper bound mean score for all four domains of quality of life. Similarly, Berlin and Hamburg scored above average for aggregate quality of life performance and reported performances above the upper bound mean score for physical health and within the mean range for psychological health, social relationships and environmental domain of quality of life. SSA migrants living in Saarland who participated in this study reported the lowest aggregate quality of life score scoring below the lower bound mean score for all four domains of quality of life. Similarly,

Rhineland-Pfalz, Bremen and Saxony-Anhalt scored low in aggregate quality of life and reported varying performance in the four domains of quality of life.

To understand these trends in SSA migrants' quality of life performance, we refer to the German Index of Socioeconomic Deprivation (GISD), developed by the Robert Koch Institute for epidemiological research and health reporting in Germany (Kroll, Schumann, Hoebel, & Lampert, 2017). Similar to the findings in this thesis, the GISD report shows that West and Eastern Germany federal states present varying but generally higher socioeconomic deprivation that presumably affects health and general well-being. Saarland, with the lowest quality of life performance, was also reported to have the highest concentration of socioeconomic deprivations in Germany (Kroll, Schumann, Hoebel, & Lampert, 2017).

The two southernmost states, i.e., Baden-Württemberg and Bavaria, alongside Hamburg and Berlin were highlighted as states with low socioeconomic deprivation in the GISD report but reported higher quality of life performances in the current research. While SSA migrants' participants' quality of life performances are believed to reflect the general trend in socioeconomic deprivation in their different federal states of residence, the reported trend is also assumed to reflect the influence of migrants' population size on their quality of life performance. States with higher number of SSA migrants report performance within or above average in all domains of quality of life.

Subjective Integration

The poor subjective integration performance reported in this thesis highlights the enormous SSA migrants' perceived exclusion in German social, cultural and economic activities. High dissatisfaction in income and career situation emphasise the different barriers in labour market participation, and the economic and financial frustration that characterise life in Germany for this migrant group. Similarly, these results show that well over half feel unwelcome in

Germany, It also reveals the real-life effect of the changing political landscape where more anti-migrant group and political parties are seemingly gaining more power and growing at the grass-root level (Akkerman, Lange, & Rooduijn, 2016).

Social Capital

The high proportion of SSA migrants that report group or network membership is believed to further highlight the importance of kinship and networks in the different SSA cultures. This social contact is assumed to be crucial for many SSA migrants' interaction with their environment. Further research on the SSA migrants group and network composition reveal that about half of these groups and networks have members with the same ethnicity and language, religion or level of education. This finding confirms the assumption of a unique group and network formation pattern among the SSA migrants' group. A high percentage of SSA migrants' participants in this study reported structural social capital that reflects high group and network density but low diversity within these groups.

The relatively weak trend in the distribution of measures of cognitive social capital, i.e., localised and centralised trust, divulges the perception of SSA migrants to the significant political and social institutions that influence their life and migration experience. This mistrust reported by participants is assumed to result from SSA migrants' accumulated experience, perceived discrimination and exclusion and the changing political narratives that seek to redefine or degrade migrants' place in German societies.

Quality of life and Subjective Integration

As one of the primary objectives of this study, the association between subjective integration and quality of life for SSA migrants in Germany was examined. Notwithstanding the issues migrants face due to language and cultural barriers, the results show that SSA migrants' subjective representation of their inclusion, exclusion, marginalisation or discrimination in the

German community is vital for their physical health, psychological health, social relationships and environmental performance of quality of life measures. While subjective integration has not been extensively researched, this finding is congruent with previous literature where immigrants' exclusion was associated with poor social participation, access to information and other activities that facilitate quality of life and health (European Union Agency for Fundamental Rights, 2017; Kirpitchenko & Mansouri, 2014).

These negative trends in SSA migrant quality of life performance transcend into communal disadvantage that was shown to vary with individual subjective integration and influence SSA migrants' relationships with various aspect of their environment. It further highlights the perceived exclusion, challenges and consequences for SSA migrants' health, socioeconomic 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 German society. The alarming dissatisfaction with life, income and career situation are believed to be consequences of the unmet physical, health and social needs that motivated migration. Similarly, the low proportion of SSA migrants that feel welcome in Germany arguably highlights the experience of systematic and racial discrimination (Schapendonk, 2012) that affects the overall well-being and integration in German society.

The evident association between the reported poor quality of life 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 and 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 regression model, predicts higher scores in three of the four domains of quality of life (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 quality of life (Bielderman et al., 2015; Campos, e Ferreira, Vargas, & Albala, 2014a). The limited access to information could explain this association. Unmet needs, poorer physical health and social relationships (Levasseur, Desrosiers, & Noreau, 2004; Reistetter, Spencer, Trujillo, & Abreu, 2005; Stancliffe, Emerson, & Charlie Lakin, 2001) resulting from lower education and older age. Gender has a significant direct effect only on the social relationship dimension of quality of life with female SSA migrants reporting better quality of life 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 factors for good quality of life varies with gender and across the different domains of quality of life. Male SSA migrants working lower jobs reported lower quality of life across all domains, whereas, the results returned no significant association for female. As shown in the results, many male SSA migrants work elementary jobs or as machine operators. This kind of jobs usually requires physical strength that harms physical health through tiredness and physical pain, as well as psychological health (Ravesteijn, Kippersluis, & Doorslaer, 2018).

Surprisingly, German language competence shows weak significant correlation with the male environmental domain and female SSA migrants' social relationship domain of quality of life. This weak correlation disappeared in the regression model for the total sample. The nonsignificant effect of German language on SSA migrants' quality of life is believed to be consequential of the German language usage, and the primary occupations reported by this migrant group. Most SSA migrants reported very low usage of the German language in two of

the aspect of life, that is: family and friendships that are crucial for life quality. Correspondingly, less than 30 per cent reported frequent usage of German language for current occupation. These trends among SSA migrants reflects the social class division by occupation and emphasise the importance of family and friends for SSA migrants' quality of life performance in Germany.

Similarly, more than half work in elementary jobs where little or no German language competency is required while close to a quarter work as professionals where arguably, other soft skills are prioritised. However, the gender-based differences in this association show that the German language cannot be ruled out as a predictor of quality of life among SSA migrants. Instead, there is a need for further investigation of the role of German language competence in facilitating better life. 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.

Generally, the reported trends for SSA migrants are in agreement with other studies that show socioeconomic and demographic characteristics as predictors of the different domains of quality of life (Bielderman et al., 2015; Brennan et al., 2013; Kaczmarek et al., 2017). They contradict other studies where males' perceived well-being were more positively affected by social relationships than their female counterparts (Warr, Butcher, Robertson, & Callinan, 2004). This different trend among the SSA migrants is assumed to have resulted from the groups' different experiences of migration and region's 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 quality of life (Higgins & Duxbury, 1992).

Social Capital and Quality of life

The relationships between dimensions of social capital, i.e. structural social capital (SSC), cognitive social capital (CSC), and aggregate quality of life for SSA migrants in Germany was explored in a structural model. The result shows a good fit model with CSC and SSC and explains 15% of the variance in quality of life performance. It also projects significant direct effects of CSC and SSC on quality of life. While these findings support results from previous research, (Mularska-Kucharek, 2015; Pollack & von dem Knesebeck, 2004; Yip et al., 2007) they provide clear insight into the relationship between these dimensions of social capital and quality of life for this African migrant group.

A multi-group analysis ascertains the reliability of the tested model. The results confirmed no significant difference in structural weight for male and female migrants as well as for participants with low or no German language skills and those with "average" or "very good" German language competence. This result implies that the adopted model is unique and valid in showing aspects of social capital that facilitates QoL among SSA migrant group.

The average network membership and diversity from the distribution of observed items could be attributed to SSA migrants' settlement patterns along the tribal and ethnic line (IOM, 2013b). This way, many SSA migrants are in groups or networks where members are of the same gender, cultural heritage, linguistic background or even social class (Deng, 1997). The low reported trust among SSA migrants is believed to have resulted from their experience of discrimination, racism and socioeconomic inequalities (Schapendonk, 2012). Although the significant gender difference in trust agrees with some previous studies, (Bonsaksen, 2012; Campos, e Ferreira, Vargas, & Albala, 2014b), it differs from other studies that reported men as expressing a higher degree of trust than women (Garbarino & Slonim, 2009) or found no gender effect at all (Fischbacher, Gächter, & Fehr, 2001). Even though the current study cannot

give a precise answer as to why this is so, it assumes these differences might have resulted from traditional SSA community structure where male family members have broader contact with people outside of their cultural backgrounds through work and exposures that have been established to be significant for communal trust (He, Lai, Lin, & Ma, 2018).

While close to half of SSA migrants reported high or very high quality of life, a gender-specific analysis projected a significant difference for male and female; for example, no male participant reported a very high quality of life compared with about 5 per cent of the female. While this result confirms gender as a demographic determinant of quality of life for SSA migrants (Bielderman et al., 2015; Brennan et al., 2013; Kaczmarek et al., 2017), it contradicts previous studies where males reported a higher quality of life than females (Warr et al., 2004). This trend reflects the differences in life experience for male and female SSA migrants. Although there is no single model of gender roles in SSA, the region's diverse cultures have many different ideas about male and female roles, most of which require or regards men as the provider for the family and women as the caregiver. This role division goes on to shape SSA migrants experience for male and female with obligations and exposure to different sides of life in Germany.

4.4 Study limitation and Further research

The results from this thesis are a big step forward for research on public health among this hard-to-reach migrant group. In addition to providing unique knowledge into SSA migrants' quality of life performance and identifying some of the factors that contribute to actualising the assimilation, integration, and inclusion of SSA migrants in Germany, this study also aims to provoke more questions surrounding the well-being of the SSA migrants group and to highlight other areas that need to be researched to identify their role in the well-being of SSA migrants. For instance, it is essential to more adeptly, explore the role of German language competence

in SSA migrant's well-being as well as other SSA migrant-specific social and cultural features. Similarly, these results have intensified the need for scientific understanding of the effect of social and economic discrimination as well as racism on quality of life performance for SSA migrants' group.

It is important to note that the cross-sectional analyses performed in this thesis limit the ability to draw causal inferences and generalisability of findings. Another limitation of the study lies in its sample composition. It is estimated that only roughly half of SSA migrant population living in Germany meet the study requirement. SSA migrants, who were "unregistered" or in the process of applying for asylum or residency status, were excluded from this study. It will, however, be interesting to explore the socioeconomic performance of this group without restriction of formal assess to economic, social and health services.

Furthermore, the low response rate in this study (less than 20 per cent) is attributed to the length of the questionnaire (which requires an average of 20 minutes to complete), low community trust, and the strict inclusion criteria. Many of the qualified participants were either sceptic or ignorant of any personal or community benefit attached. This low drive remained even though the study purpose and implication was highlighted in the survey questionnaire, and participants' animosity was guaranteed. It will therefore be helpful to develop motivation strategies that encourage participation among SSA migrants' group for future research.

Another limitation is the reliability of the tool that was employed to collect data on quality of life. Although EUROHIS-QOL is a well-validated questionnaire for assessing the quality of life in a European population, its validity for migrant populations with complex cultural computation is yet to be tested. As shown in the results from CFA, one of the eight observed indicators presented a poor factorial validity, with standardised regression weights $\lambda = .42$. The

low standardised regression weights hint at the need to review and adapt this instrument to aid a more precise assessment of SSA migrant quality of life for future research.

This finding is a big step forward for research and public health among this hard-to-reach migrant group. While this doctoral research provided the first insight into the quality of life performance of SSA migrants and identified some of the factors that can contribute to actualising the assimilation, integration, and inclusion of SSA migrants in Germany, it also projects other areas that needs to be researched to identify their roles in the well-being of SSA migrants. For example, it is essential to further, and more adeptly explore the role of German language competence in SSA migrants' well-being as well as other SSA migrant-specific social and cultural features. Similarly, understanding the effect of social and economic discrimination as well as racism on life performance is crucial for building a complete knowledge of SSA migrants' group that facilitates health and social well-being promotion.

5 CONCLUSIONS AND IMPLICATIONS

As already described the associations between quality of life and various features of migration cannot and should not be assumed to be universal. Instead, it is crucial to investigate the different constructs in determining essential and practical aspects of migrants' life and social relations that promote quality of life for the various migrant groups.

This doctoral thesis presents an adaptable approach for collecting representative data from SSA migrants in Germany that facilitates the development of holistic intervention projects and contributes to research by providing informed conclusions on life performances among this group. The approach employed in this thesis was to collect data on the associations between quality of life, social capital, subjective integration and various socioeconomic and demographic features of the SSA migrant group in Germany. The overall representativeness of the resulting data allows for a rare evaluation of quality of life and other socioeconomic indicators as intended.

SSA migrants' perception of integration and social capital was found to matter for the advancement of their physical health, psychological health, social relationships and environmental quality of life. In practical terms, deliberate efforts aimed to reduce the burden of depression and negative feelings, foster social connections and neighbourhood safety, create channels to acquire and share information and skills, as well as opportunities for recreational and leisure activities will correspond to better integration.

Also, the findings highlight the need to strengthen SSA migrants localised and centralised trust by facilitating social participation and creating linkages between networks. Local and central support for the creation of networks that transcend tribal and ethnic differences will further boost SSA migrants' trust. Improving social capital will physical health, facilitate satisfaction with self, and improve personal relationships as well as the conditions of living. Furthermore, actions aimed at meeting SSA migrants' needs and creating time and energy for everyday life

and leisure will improve social capital and quality of life and strengthen SSA migrants' localised and centralised trust thereby, facilitating social participation and creating linkages between networks and groups.

In conclusion, findings in this thesis provide policymakers, social workers and researchers alike, with a step forward towards actualising the assimilation, integration, and inclusion of SSA migrants in Germany societies through policies and intervention programs.

6 ABBREVIATIONS

AMOS …….....	Analysis of Moment Structures
BAMF …….....	Bundesamt für Migration und Flüchtlinge
CFI …..…….....	Comparative Fit Index
CSC …….....	Cognitive Social Capital
EU …….....	European Union
EUROHIS-QOL ……	European Health Indicator Survey – Quality of Life
GFPR …….....	German Foreign Population Report
GISD …….....	German Index for Socioeconomic Deprivation
RMSEA …….....	Root Mean Square Error of Approximation
SCQOL …….....	Social capital and Quality of Life
SD …….....	Standard Deviation
SE …….…….....	Standard Error
SRMR …….....	Standardised root mean squared residual
SSA…….....	Sub-Saharan African
SSC …….....	Structural Social Capital
WHO…….....	World Health Organization
WHOQOL-BREF ……..	World Health Organization Quality of life - Bref
WHOQOL …….....	World Health Organization Quality of life

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8 LIST OF FIGURES

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10 ABSTRACT – ENGLISH

This thesis presents empirical evidence on various aspect of Sub-Saharan African migrants' life performance in Germany. It explores subjective integration association with domains of quality of life and the structural links between cognitive social capital, structural social capital, and aggregate quality of life performance for Sub-Saharan African migrants in Germany.

Data from 518 Sub-Saharan African migrants collected in a cross-sectional survey across the 16 Germany federal states were analysed. Association between participants' quality of life domains, subjective integration and socio-demographic characteristics were assessed using Pearson product-moment correlations and stepwise multiple linear regressions. The structural link between the quality of life and dimensions of social capital were evaluated in a Structural Equation Model performed with Analysis of Moment Structures.

Participants' age averaged 32.5 years (SD 7.93). The sample reported a low quality of life across all domains. Multiple linear regression revealed that subjective integration, age, education, and gender had significant associations and explained up to 27% of the variance in the quality of life domain scores. The structural model testing the direct effects of cognitive and structural social capital on quality of life had a good fit, with $\chi2(47) = 157.60$, $p < .01$; $\chi2/df = 3.35$; CFI = .95; RMSEA = .07 ($p = .007$; 90% CI = .06/.08); and SRMR = .04 and explained 15% of the variance in quality of life. Significant direct effects of cognitive and structural social capital on quality of life, with $\beta = .27$, $p < .01$ and $\beta = .23$, $p < .01$, respectively.

The result supports the conclusion that subjective integration and social capital significantly associates with Sub-Saharan African migrants' quality of life in Germany. It provides policymakers, researcher and public health professionals with unique knowledge of life among Sub-Saharan African migrants in Germany and recommends actions to facilitate improved quality of life among this migrant group.

11 ABSTRACT – DEUTSCH

In der vorliegenden Dissertation werden empirische Befunde zu der hinsichtlich unterschiedlicher Aspekte differenzierten Lebensleistung von in Deutschland lebenden Migrantinnen und Migranten aus Ländern südlich der Sahara zusammengefasst. Untersucht wurden einerseits die Zusammenhänge zwischen der subjektiv erlebten Integration in Deutschland und einzelnen Domänen der Lebensqualität sowie andererseits die Assoziationen zwischen kognitivem Sozialkapital, strukturellem Sozialkapital und der Lebensqualität insgesamt.

Die Analyse basiert auf den Daten von 518 Erwachsenen, die aus afrikanischen Ländern südlich der Sahara nach Deutschland migriert sind und im Rahmen bundesweiten Querschnittserhebung mittels eines Online-Fragebogens befragt wurden. Zur Untersuchung der Zusammenhänge zwischen den verschiedenen Domänen der Lebensqualität, der subjektiv bewerteten Integration und den soziodemografischen Merkmalen der Menschen mit afrikanischem Migrationshintergrund wurden Pearson-Produkt-Moment-Korrelationen und schrittweise multiple lineare Regressionen durchgeführt. Der angenommene strukturelle Zusammenhang zwischen der Lebensqualität und den zwei Dimensionen des Sozialkapitals wurde mittels eines Strukturgleichungsmodells, das mit dem Statistikprogramm Analysis of Moment Structures (AMOS) berechnet wurde, geprüft.

Das Durchschnittsalter der afrikanischen Migrantinnen und Migranten betrug 32,5 Jahre (SD 7,93). Die teilnehmenden Männer und Frauen schätzten ihre Lebensqualität in allen Domänen als gering ein. Die multiple lineare Regression ergab, dass die subjektiv bewertete Integration, Alter, Bildungsstand und Geschlecht signifikant assoziiert waren und bis zu 27% der Varianz in der Bewertung der Lebensqualität erklärten. Das Strukturmodell, mit dem die direkten Effekte des kognitiven und strukturellen Sozialkapitals auf die Lebensqualität geprüft wurden, zeigte mit $\chi 2$ (47) = 157,60, $p < 0,01$; $\chi 2$ / df = 3,35; CFI = 0,95; RMSEA = 0,07 ($p = 0,007$; 90% CI = 0,06 / 0,08) und SRMR = 0,04 eine gute Anpassungsgüte und erklärte 15% der Varianz in der Lebensqualität. Ebenso zeigten sich mit $\beta = 0,27$, $p < 0,01$ bzw. $\beta = 0,23$, $p < 0,01$ signifikante direkte Effekte des kognitiven und strukturellen Sozialkapitals auf die Lebensqualität.

Die Ergebnisse stützen die Schlussfolgerung, dass die subjektiv eingeschätzte Integration und das soziale Kapital einen wesentlichen Einfluss auf die Lebensqualität von Migrantinnen und

Migranten aus Ländern südlich der Sahara in Deutschland nehmen. Die Befunde liefern politischen Entscheidungstragenden, Forschenden und Angehörigen der Gesundheitsberufe substanzielle Erkenntnisse über das Leben von nach Deutschland migrierten Menschen aus afrikanischen Regionen südlich der Sahara und verweisen auf Maßnahmen zur Verbesserung der Lebensqualität in dieser Migrantengruppe.

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13 CURRICULUM VITAE

Curriculum vitae is omitted due to data protection reasons

14 EIDESSTATTLICHE VERSICHERUNG

Ich versichere ausdrücklich, dass ich die Arbeit selbständig und ohne fremde Hilfe verfasst, andere als die von mir angegebenen Quellen und Hilfsmittel nicht benutzt und die aus den benutzten Werken wörtlich oder inhaltlich entnommenen Stellen einzeln nach Ausgabe (Auflage und Jahr des Erscheinens), Band und Seite des benutzten Werkes kenntlich gemacht habe.

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