Original Article

Analyzing Adjustment to Aging and Subjective Age from Angolan and Portuguese Community-dwelling Older Adults' Perspectives

Sofia von Humboldt*, Isabel Leal, Filipa Pimenta

Research Unit in Psychology and Health, R&D, Instituto Superior de Psicologia Aplicada—Instituto Universitário, Lisbon, Portugal

1. Introduction

Research findings on the oldest and young old population demonstrate that the third and fourth age entails a level of biocultural incompleteness, vulnerability, and unpredictability. Despite the high prevalence of negative age-related changes, older people still feel younger than they actually are and are generally satisfied with their aging.

Portuguese elderly people constitute 18.1% of the total population, surpassing the amount of young people (16%). This proportion of old people in Portugal is expected to increase to 32% by 2050. At present, life expectancy is 79.4 years for women and 72.4 years for men, and the actual dependency ratios will almost double in Portugal from around 23% to 45% in 2050.

By contrast, the Angolan population is quite young and older people make up only a relatively small fraction of the population (only 2.8% of the total population is ≥65 years). The expected percentage of old people in Angola in 2050 is 6% of the population. As of 2006, official statistics showed 28,854 legal Angolan residents in Portugal, and the population of Angolan legal residents grew by 12.6% from 2001 to 2003. However, this number is likely an underestimate of the true size of the community, as it neither includes illegal migrants nor people of Angolan origin who hold Portuguese citizenship. Moreover, the second most important region of location of the foreign community in Portugal is the Algarve with

* I certify that all my affiliations with or financial involvement in, within the past 5 years and foreseeable future, any organization or entity with a financial interest in or financial conflict with the subject matter or materials discussed in the manuscript are completely disclosed (e.g., employment, consultancies, honoraria, stock ownership or options, expert testimony, grants or patents received or pending, royalties). The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper. Sponsor's Role: The fund approved the design and aims of the study but did not play any role in the collection of data, interpretation of results, or preparation of this article.

* Correspondence to: Dr Sofia von Humboldt, Research Unit in Psychology and Health, R&D, Instituto Superior de Psicologia Aplicada—Instituto Universitário, Rua Jardim do Tabaco, 34, 1149-041 Lisboa, Portugal.

E-mail address: sofiav.humboldt@gmail.com (S. von Humboldt).

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13%10. To date, little attention has been paid to older African immigrants in Portugal in the literature.

Two early theoretical models explained adjustment to aging (AtA): the activity theory emphasizing the maintenance of the activities and attitudes of middle age, and the disengagement theory11. Moreover, Thomae12 proposed that AtA was achieved when a balance between the cognitive and motivational systems of the person has been attained.

AtA is a proximate concept, yet distinct, from quality of life13, and well-being14–16, previously defined and validated in the gerontological literature. In addition, a process of continuous adjustment is part of the concept of successful aging1. AtA includes components such as control, self-acceptance, personal growth, autonomy, positive social network, purpose in life18–22, and generativity23 that may vary with time, age, sex, race, culture, financial status, and society24.

Furthermore, subjective age (SA) refers to the construct of age as experienced by an individual25–27. Overall, the concept of SA offers access to the aging experience, an area of research that is relatively fresh in psychogerontology28. The associations found between SA and indicators of health, well-being, and functioning were in line with previous studies, suggesting that SA is a valid measure of the personal aging experiences29–31. Older individuals’ own evaluation of their age is, in fact, a better predictor of psychological functioning than an objective count of chronological years32,33. Thus, studies on self-perceptions of aging can contribute to our understanding of the aging self34.

Considering the distinctiveness of older adults’ experiences concerning the multidimensional context of adjustment and age, it is essential to explore older adults’ self-reports, resulting from in-depth narrative interviews35. Moreover, the concept of adjustment and age is key to a salutogenic approach focused on the well-being, health, and adapted functioning of older adults21,22,32,35–37. However, only a few later attempts have been made to explore the potential association between AtA and SA in an overall model for older people. Hence, in the present study, we extend previous research by: (1) eliciting categories that had impact on Angolan and Portuguese older adults’ SA and AtA; (2) investigating latent constructs that can work as major determinants in SA and AtA; and (3) examining the potential explanatory mechanisms of the adjustment and age overall model.

2. Materials and methods

2.1. Sampling of participants

The sample for the present research consisted of 102 eligible noninstitutionalized community-dwelling individuals, aged 75 and over [mean = 80.5, standard deviation (SD) = 5.76; range: 75–99], 53.9% female, 50% Angolan, 58.8% married, and 56.9% professionally inactive. The sampling of participants was based on the availability of respondents, through senior universities’ message boards, local and art community centers’ list serves, in Lisbon and the Algarve regions.

Because the study attempted to understand the phenomena from the self-reports of these participants, it was conducted in their setting to uncover the uniqueness of perspectives concerning the multicultural context of age and adjustment by talking to them. In this context, the sampling was performed purposefully, to allow data for comparing two different cultural groups and to explore their distinct self-reports. Therefore, the participants had two ethnic backgrounds and were recruited in low-income areas, and therefore, were not representative of the society as a whole. All the interviews were performed in Portuguese, as it was the predominant primary language spoken by all the participants.

Older adults were included when not diagnosed with concurrent severe mental disorders according to the Diagnostic and Statistical Manual of Mental Disorders 4th edition criteria and if they scored in the normal range on the Mini Mental Status Exam (MMSE) (>26)38. The MMSE was administered to all participants in standardized procedures and the mean score was 28.7 (SD = 1.01; range: 27–30; Table 1). Participants with any history of neurological or psychiatric disease, including major illnesses, anxiety, depression, dementia, sleep disorders, or with known substance abuse disorders, which might compromise cognitive function were excluded. This was done to exclude possible confounding variables that may influence the results.

Of 105 individuals initially meeting the study criteria, three were excluded for a number of reasons (e.g., scheduling problems, incomplete background information, incorrect filling-in, and inability to commit to the interview). Hence, 102 older adults comprised the study. Table 1 shows the characteristics of the interview participants.

2.2. Measures and procedure

2.2.1. Data collection

Semistructured interviews based on an interview guide were conducted in the participants’ own homes. Each interview was performed individually and began with a set of straightforward background questions, to find out about the informant’s living arrangements, health, nationality, age, family, education, and work, followed by two open-ended questions: “I would like to understand what, in your point of view, contributes to your adjustment to aging in this phase of your life” and “How do you feel about your age?” These questions were elaborated to address two core areas: SA and AtA. Fig. 1 shows the design of sociodemographic and health-related questionnaire, as well as the semistructured interview.

All interviews were conducted and audio recorded by the same researcher (S.v.H.) who had no previous relationship with the participants. Upon completion of the interview, participants were asked to evaluate the schedule and the interview process. This evaluation included questions about the length of the interview and the appropriateness and relevance of questions asked. Participants were also asked to identify any questions that they found difficult to answer.

2.2.2. Data analysis

Data were analyzed, employing content analysis and using the following procedure: (1) development of major emergent categories, mutually exclusive, that reflected the 102 interviews, for each one of the two pre-existing categories: SA and indicators of AtA; (2) creation of a list of coding cues; (3) analysis of verbatim quotes and best-fit characterizations for a given emergent category; (4) definition of subcategories, within and across the narratives, while preserving the principle of homogeneity of the category; and (5) derivation of major emergent categories until the point of theoretical saturation was reached39,40. Our structure of categories was then subjected to an external review and critical feedback was obtained from reviewers who have experience with older adults. An independent analysis of the 102 interviews was performed by a jury of two psychologists (both faculty).

In the sequence of a thorough discussions on the meaning and characterization for each category, a consensus between researchers was obtained. Disagreements were solved by returning to the transcripts and a final group coresolution regarding the categories was made only when both researchers reached an agreement on the definition of each category with the participants’ actual words, or close proximity to their words. Reliability between researchers was measured through the Cohen Kappa coefficient. All
AtA and SA categories presented a value above 0.80 (0.878 /C20 k /C20 0.953 and 0.871 /C20 k /C20 0.983, respectively), indicating a high agreement rate. No missing ratings were reported in this study.

Representations of the associations between the emergent categories obtained from the narrative analysis and latent constructs that can work as major indicators in older adults’ recognized SA and AtA were assessed by a multiple correspondence analysis (MCA). Statistic criteria were the following: (1) minimum of 5.0% of the total variance explained by each factor; and (2) minimum eigenvalue of 1 for each factor. Data were analyzed using SPSS for Windows (version 19.0; SPSS Inc., Chicago, IL, USA).

The Portuguese Foundation for Science and Technology and Instituto Superior de Psicologia Aplicada—Instituto Universitário approved the study. Informed consent was obtained from all the study participants and the study protocol was approved by the Research Unit in Psychology and Health’s coordination committee.

3. Results

3.1. Content analysis of the emergent categories

With regard to the results from content analysis, the jury identified a total of seven categories for indicators of AtA: (1) accomplishment and future projects, (2) occupation and leisure, (3) health and well-being, (4) valorization of time and age, (5) social support, (6) stability and safety, and (7) existential meaning and sense of limit.

3.2. Accomplishment and future projects

Participants reported accomplishments (e.g., teaching) and future projects as contributing to AtA.

“I only feel alive when I am writing.” (Participant 92)

“I am always thinking of my next project.” (Participant 101)

3.3. Occupation and leisure

Occupation (e.g., nursing) and leisure (e.g., driving old cars) were indicated by participants as indicators of AtA.

“I’m very active professionally. I still get contracts as a technical consultant.” (Participant 34)

3.4. Health and well-being

Participants reported health and well-being as relevant to their AtA.

“I try to be attentive to my body. A simple cold can be very distressful.” (Participant 20)

3.5. Valorization of time and age

Participants indicated time as a valuable resource and that old(er) age made them perceive life as an appreciated time.

“I try to live my life as if every day was the last day of my life.” (Participant 95)

3.6. Social support

Participants indicated that social support from their family, friends, colleagues from work, and neighbors contributed to their AtA.

“I am a happily married man. I cannot imagine my life without her.” (Participant 39)

3.7. Stability and safety

Older adults reported a safe environment and financial stability as an important factor for their AtA.

“We are very lucky for living in such a safe area.” (Participant 86)
3.8. Existential meaning and sense of limit

Participants verbalized the awareness of the end of the life cycle as contributing to their AtA. Furthermore, participants reported existential meaning and sense of purpose, as relevant for their AtA.

“I need to know that I can still believe in me.” (Participant 75)

Social support was the most verbalized indicator of AtA for Angolan participants (43.3%), whereas social support and health and well-being were the most referred indicators of AtA by Portuguese participants (both 16.3%), as seen in Table 2.

“My family is my fortress. My children are always there for me.” (Participant 17)

“I still hear and see very well.” (Participant 29)

“Being healthy is very important to me.” (Participant 33)

Moreover, findings designated a total of five categories for SA, namely, (1) in harmony, (2) fearless, (3) with concern, (4) youthful, and (5) satisfactory.

3.9. In harmony

Participants reported that they felt in harmony with their present age, as it was according to their experiences.

“I feel in peace about my age.” (Participant 24)

3.10. Fearless

Participants verbalized that they were not afraid of their age and that did not have concerns about their future.

“I face age without fear and I accept whatever it will bring me.” (Participant 81)

3.11. With concern

Participants reported that they felt aged and concerned about their age.

“As you can see, I am an old woman … I worry about my age.” (Participant 19)

3.12. Youthful

A youthful attitude toward age was indicated by the participants.

“Nothing changed inside of me. I am an adolescent as I always have been.” (Participant 97)

3.13. Satisfactory

Age was pointed out by participants as acceptable.

“I have no complaints. I feel well about my age.” (Participant 17)

Youthful was the most mentioned SA for Angolans (24.4%; Table 2).

“I do not worry about my age. I still feel as young as in my youth.” (Participant 38)

In harmony and satisfactory (both 22.9%) were the most referred SA for Portuguese older adults (Table 2).

“I feel that age corresponded to all what I expected.” (Participant 12)

“Age has been a blessing to me.” (Participant 75)

Furthermore, an asymptotic Chi-square test was used to analyze whether the demographic groups diverged significantly concerning AtA and SA. In detail, significant differences among the groups were found regarding nationality $[\chi^2(8) = 33.00; p < 0.05]$, educational level $[\chi^2(24) = 73.92; p < 0.05]$, professional status $[\chi^2(8) = 18.94; p < 0.05]$, and perceived health $[\chi^2(8) = 19.50; p < 0.05]$ for the AtA total score.

Moreover, significant differences among the groups were also found regarding nationality $[\chi^2(5) = 20.29; p < 0.05]$, educational level $[\chi^2(15) = 36.14; p < 0.05]$, professional status $[\chi^2(5) = 17.71; p < 0.05]$, and marital status $[\chi^2(10) = 20.43; p < 0.05]$ for the SA total score.

3.14. MCA of the emergent domains

The MCA assesses the correlational structure of the precategories in our study: AtA and SA. Therefore, our findings indicate a model for the precategories, with diverse factors and factor loadings.
When representing an overall model that joins the concepts of adjustment and age, we considered the correlational structure of the precategories in our study (indicators of AtA and SA). The study results suggested a three-dimensional model (accounting for 72.9% of total variance), which includes integrated, congruent, and concerned as a best-fit solution for Angolan participants (Table 3); for the Portuguese participants, the three-dimensional model (accounting for 90.5% of total variance) included fulfilled, reconciliated, and driven as a best-fit solution (Table 4).

4. Discussion

This study indicated the emergence of subjective (e.g., adaptation to change) and objective themes (e.g., safety), as indicators of AtA, which suggested the importance these can have on AtA for the participants and supported existing literature18–20.41,42. With regard to SA, older adults expressed positive SA (86.4% of overall narratives), and in harmony was the most referred SA for older adults.

For Portuguese participants, the largest factor fulfilled accounted for 37.9% of total variance, whereas for Angolan participants, integrated represented 30.2% of total variance. Driven was the least representative factor for Portuguese elderly population (18.7% of total variance), whereas it was concerned for the Angolan participants (17.3% of total variance).

Because aging is a multidimensional concept, sociodemographic, cultural, national, and ethnic differences may influence the process of aging43. In line with this literature, significant differences were found regarding nationality, educational level, professional status, and perceived health for AtA, as well as regarding educational level, professional status, nationality, and marital status for SA. These results illustrate the diversity of aging perspectives in our sample, in which two distinct national backgrounds are present, 56.9% are professionally inactive, 58.8% are married, 82.4% of the participants completed high school at most, and 59.8% perceive their health as good. In contrast to our initial expectations, however, participants did not significantly diverge concerning their annual income.

The MCA regarding the correlational structure of the two precategories, indicators of AtA and SA, emphasizes that these are largely explained by a three-factor model, for each nationality. Thus, for Angolan participants living in the community, the first factor (integrated) assembled fearless, social support, and valorization of time and age. It must be noted that older adults live within a relatively steady social network, which provides regular contact over time43. Furthermore, participation in social activities can mediate the direct relationship between extraversion and happiness44. AtA can be increased by improving the fit between the person and the environment. For Angolan elderly people living in Portugal, when family support was not available, more varied forms of support were tapped to meet their needs (e.g., friends and neighbors). Indeed, research shows that negative interactions are more frequent among family members than among friends45.

In harmony, youthful, satisfactory, stability and safety, and existential meaning and sense of limit, constituted the second factor (congruent). Previous literature indicated that in life span developmental psychology, the perception that one’s life is coming to an end is operationalized, among others, in the concept of future time perspective46. Furthermore, admitting to oneself that one is close to

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Emergent categories resulting from content analysis of the precategories “subjective age” and “indicators of AtA.”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Angolan</td>
</tr>
<tr>
<td>Subjective age</td>
<td>Category frequency</td>
</tr>
<tr>
<td>In harmony</td>
<td>51</td>
</tr>
<tr>
<td>Fearless</td>
<td>48</td>
</tr>
<tr>
<td>With concern</td>
<td>30</td>
</tr>
<tr>
<td>Youngful</td>
<td>57</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>48</td>
</tr>
<tr>
<td>Score of precategory</td>
<td>234</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Table 3</th>
<th>Three-dimensional representation for “subjective age” and “indicators of AtA” for Angolan older adults: factor loadings for each dimension, mean loadings, and % inertia (variance) explained.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domains</td>
<td>Integrated</td>
</tr>
<tr>
<td>In harmony</td>
<td>0.140</td>
</tr>
<tr>
<td>Fearless</td>
<td>0.907</td>
</tr>
<tr>
<td>With concern</td>
<td>0.133</td>
</tr>
<tr>
<td>Youngful</td>
<td>0.392</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>0.067</td>
</tr>
<tr>
<td>Social support</td>
<td>0.516</td>
</tr>
<tr>
<td>Health and well-being</td>
<td>0.062</td>
</tr>
<tr>
<td>Occupation and leisure</td>
<td>0.016</td>
</tr>
<tr>
<td>Accomplishment and future projects</td>
<td>0.016</td>
</tr>
<tr>
<td>Stability and safety</td>
<td>0.319</td>
</tr>
<tr>
<td>Valorization of time and age</td>
<td>0.750</td>
</tr>
<tr>
<td>Existential meaning and sense of limit</td>
<td>0.313</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>3.629</td>
</tr>
<tr>
<td>Inertia</td>
<td>0.302</td>
</tr>
<tr>
<td>% of variance</td>
<td>30.244</td>
</tr>
</tbody>
</table>

AtA – adjustment to aging.

Bold values contribute with the highest value for the factor.
dying is likely to be influenced by one’s general acceptance of and attitudes toward death.  

The third factor (concerned) assembled with concern, health and well-being, occupation and leisure, and accomplishment and future projects. However, the third (0.217) and fourth (0.214) categories had a low loading in the third factor, which indicated that these categories are not very significant in this factor. In line with these results, research has shown that happiness increases when older adults combine effortful social, physical, cognitive, and household activities with restful activities. Furthermore, productive activities contributed to well-being of older adults and that professional engagement especially with peers contributed to aging well.

For Portuguese participants, in harmony, fearless, social support, health and well-being, and stability and safety constituted the first factor (fulfilled). Gerontologists often emphasize the importance of older adults’ embeddedness in dense, kin-centered social networks. Those who have network members who know each other have more access to social support, companionship, and emotional aid. In addition, embeddedness in a dense network yields social capital, which increases network members’ capacities to monitor and share information about a person. Moreover, age-associated attrition in social networks is partially attributed to functional loss, health disparities, and the discontinuation of personal relationships. Furthermore, some scholars have taken the view that friends may be more contributive to well-being in older adults than the family.  

The second factor (reconciled) gathered youthful, satisfactory, occupation and leisure, valorization of time and age, and existential meaning and sense of limit. Moreover, satisfactory (0.408) and occupation and leisure (0.437) had a low loading in the second factor, which indicated that these categories are not very significant in this factor. Previous literature suggested that being active in old age may relate positively to happiness because it may regulate people’s mood and may satisfy various personal needs. Conversely, household activities appear to be detrimental to psychological well-being (e.g., grocery shopping, household finances, cooking). Moreover, in our study, the third factor (driven) comprised old and accomplishment and future projects; hence, these older adults were concentrated on their fulfillment by involving themselves in meaningful activities. Frankl and Maslow saw existential meaning, or personal meaning, as a universal human need. Moreover, three major sources of meaning are meaningful work or good deeds, authentic encounters with others, and the attitude one chooses to adopt when faced with an uncontrollable situation. Moreover, growing literature suggests that success in fulfilling challenges may yield more positive perceived age.

Despite the relevant findings from this study, a number of limitations must be considered. Although a diverse sample of participants was recruited, the use of a selection procedure based on the availability of the participants could have resulted in some selection bias. Even though the interviews were conducted with a view to being bias free, two core areas were predefined to be addressed. Thus, interviews tended to be steered to these areas that could have biased the results. In addition, there is no certainty that different researchers would not come up with different categories. Thus, qualitative research was necessary to maximize validity and to emphasize the need for researchers and health professionals to be perceptive to the varying perceptions of older adults. Finally, our findings cannot be generalized to other samples and only reveal the perceptions of our participants. It indicated only relevant clues to be considered in broad assessment for older adults, clinical practice, and future research.

Additional research is needed into the conceptual framework of age, old age for older adults). Furthermore, we consider that these user-driven outcomes can come up from part of a broad assessment for older adults, and that these can be useful in clinical practice and health-care planning. In this context, an adjustment and age overall model yields information on the ways the older adult in various cultural settings adapts to challenges that are related to late adulthood. In sum, the effect of variety on aging well, presented in this paper, is an important contribution to the unexplored multidimensional and cross-cultural context of AtA in this population and its association with SA, in an overall model.

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Analyzing Adjustment to Aging and Subjective Age


