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Disadvantaged youths' subjective well-being: The role of gender, age, and multiple social support attunement

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Abstract

This paper explores the relationship between gender, age, Multiple Social Support Attunement (MSSA), and disadvantaged youths' Subjective Well-Being (SWB). MSSA is defined as social support patterns regarding multiple sources. In this study, MSSA patterns included closest family member, mentor, and best friend support. SWB was measured in terms of quality-of-life, social anxiety, and depression.

Two hundred and thirty-six adolescents aged between 12 and 18 years old (M = 14.10; SD = 1.78; 60.20% boys) participated in this study. A three-class solution was retained after Latent Class Analysis (LCA) was conducted, guaranteeing a more balanced participant distribution and a more feasible comparison between MSSA patterns. Further analyses showed that MSSA patterns were associated with disadvantaged youths' quality-of-life, social anxiety and depression, regardless of age and gender effects. These associations were more generalized and systematic than those between gender or age and the selected well-being indicators. High MSSA also emerged as an optimal pattern to improve disadvantaged youths' SWB, especially among early adolescents. Recommendations are made to improve MSSA assessment in social interventions, as well as to promote cross-generational activities that may help to activate high MSSA shared by peers and significant adults.

Keywords: multiple social support; well-being; quality-of-life; social anxiety; depression.

Introduction

Multiple social support refers to help, encouragement, and protection provided by two or more sources from the same or from different social groups (family, friendships, and/or work, among others) (Rueger et al. 2010; Sarason and Sarason 2009). Its quality has been targeted as a significant Subjective Well-Being (SWB) predictor (Lucas et al. 2008). This research aims to understand to what extent structural factors, such as gender and age, Multiple Social Support Attunement (MSSA) and the potential interaction between these factors, are related to disadvantaged youths' SWB. MSSA refers to interindividual differences in perceived patterns of social support consistency provided by multiple support sources. The term 'disadvantaged youths' describes young people with fewer opportunities to achieve a better education or improved societal status, because of social, economic, territorial, and/or cultural adversities (Bendit and Stokes 2003). This conceptual option emphasizes how structural/contextual barriers undermine vulnerable youths' potential. It also acknowledges that 'disadvantaged youths' is a legal expression to structure access rights to support and positive development programs, such as the Escolhas program, a nationwide Portuguese initiative chosen as the site for this study. SWB is measured in terms of quality-of-life, social anxiety, and depression.

This study may contribute to the literature. First, the connections between MSSA patterns among disadvantaged youths and their SWB, including potential interaction with gender or age remain unstudied. This vision represents a shift of focus from a comparison between the influence of each support source, which dominates the literature, and an emphasis on MSSA, which underlines the potential relevance of greater/lesser attunement between sources. Second, this study is the first to focus on MSSA's influence on the SWB of different disadvantaged youth age and gender groups. The need to understand how MSSA operates among disadvantaged youth groups, as

well as across gender and age subgroups is a gap needing to be filled. The literature has shown that vulnerable youths tend to show worse well-being prospects compared to the general population, whether their vulnerabilities are due to clinical conditions (Tremolada et al. 2016), cultural differences (Alonso-Fernández et al. 2017), or lack of social conditions and family support (Josefiak and Kayed 2015). However, these differences have not been related to MSSA patterns. In addition, multiple social support compensatory effects, among which MSSA patterns may be included, are particularly important in improving disadvantaged adolescents' well-being prospects, because MSSA quality is associated with more encouraging developmental perspectives at this stage (Simões et al. 2018).

Subjective Well-Being: Definition and Indicators

SWB refers to people's affective and cognitive assessment of their own lives concerning aspects such as mental or physical health, social relationships, or socioeconomic status (Adler and Seligman 2016; Lucas et al. 2008). SWB stems from a hedonic perspective on well-being, associated with happiness or pleasure, which parallels a eudemonic perspective focused on the realization of human virtue or potential for the optimal functioning of an individual's life. SWB measurement is based on subjective questions that allow individuals to ponder how satisfied they are with their lives, based on their stories and preferences. Thus, SWB is mostly assessed using self-reporting methods for individual perceptions of well-being (Adler & Seligman 2016). In contrast, objective well-being assessment is based on concrete indicators, such as income or objective health, issued by experts or organizations like governments or international bodies. Income level, unemployment rates, life expectancy, crime rates, literacy, or leisure hours are examples of objective measures (Adler & Seligman 2016).

High SWB encompasses three distinct dimensions: frequent and intense positive states, the relative absence of negative emotions, and global life satisfaction (Adler and Seligman 2016). Bradburn (1969) demonstrated that SWB was a function of the independent dimensions of positive and negative affectivity. Although this distinction has remained a central feature in defining SWB, refinements have been made to convey how people assess their own lives in terms of both affective (how they feel) and cognitive (what they think) components of well-being (Adler and Seligman 2016, Diener 2009). Thus, a comprehensive SWB evaluation requires positive and negative cognitive and affective indicators, due to strong evidence that positive and negative cognition and affect are independent SWB dimensions (Lucas et al. 2008).

In this study, one positive SWB indicator (quality-of-life) and two negative indicators (social anxiety and depression) are used. The World Health Organization (1997) has defined Quality-of-Life as the individual perception of one's position in life, considering cultural context, personal values, and subjective goals, expectations, and routines. Quality-of-life measures are multidimensional and may emphasize physical/psychological condition, relationship quality, or perceptions about dignity, performance or autonomy (Ravens-Sieberer et al. 2007). Social anxiety involves a fear of being embarrassed or humiliated in social interaction or in performance situations (Carvalho et al. 2015). It tends to be particularly prevalent in adolescent peer relationships; its persistence and degree of impairment may lead to a psychological disorder also known as a social anxiety disorder (American Psychological Association 2013). Depression is a multidimensional condition involving cognitive (e.g. self-depreciating thoughts), emotional (e.g. feelings of sadness), behavioral (e.g. social withdrawal), and physical (e.g. lack of energy) manifestations. The persistence of these symptoms may lead to psychopathology; its high prevalence is a serious worldwide

public health problem, also affecting older children and adolescents (American Psychiatric Association 2013).

Gender, Age, and Subjective Well-Being among Disadvantaged Youths

Age and gender have been described as key sources of variation across SWB indicators among adolescents, but mixed trends are evident (Rueger et al. 2016). Gender disparities have been found regarding quality-of-life. Some studies identify similar rates for adolescent boys and girls (e.g. Matos et al. 2017), a few detail higher quality-of-life rates among boys (e.g. Chraifa and Dumitrub 2015), and others report the opposite (e.g. Tremolada et al. 2016). These contradictions may result from different research contexts or different quality-of-life measures. While certain studies emphasize quality-of-life physical elements (Marques et al. 2017), others focus on its psychological dimensions, or involve a multidimensional assessment. Among clinically vulnerable youths, girls tend to show lower quality-of-life rates (Tremolada et al. 2016). Nonetheless, gender differences on quality-of-life measures among socially disadvantaged youths are underreported.

Gender comparisons show different trends when SWB is compared based on negative indicators, such as social anxiety and depression. Adolescent girls report higher levels of social anxiety than boys (Chaplin et al. 2009), a propensity that is stronger among clinically-diagnosed samples (Cummings et al. 2013). Depressive symptoms are also more prevalent among girls (Cummings et al. 2013) and can be two to three times higher when compared to boys. This trend is consistent among socially disadvantaged girls and is more pronounced among girls at-risk of school failure (Patwardhan et al. 2017).

Girls' proneness to report worse SWB than boys may be explained by a multitude of factors. Girls' early physical and brain maturation, leading to the experience of normative negative feelings, greater predisposition for rumination and a negative cognitive style compared to boys, along with boys' greater self-esteem and self-confidence, help to justify these distinctions (Cotterell 2007; Cummings et al. 2013). Moreover, girls seek more social support than boys. While they become aware of social relationships earlier than boys, they also report greater dependence and degree of relationship conflict, which may contribute to worse SWB (Cummings et al. 2013).

Age is also a determining factor of SWB outcomes. Quality-of-life is generally higher in late childhood compared to early adolescence (Dolan et al. 2008). The transition to adolescence induces greater inclination for negative social evaluation and depression. These symptoms may overlap, but social anxiety tends to precede depressive symptoms (Dalrymple and Zimmerman 2011). These negative SWB indicators tend to be worse in early than in late adolescence, including among more vulnerable youths (Dolan et al. 2008). This pattern is justified by developmental demands, such as the diversification of social relationships, the greater centrality of peer relationships (in which social interaction and performance are more valued), the normative involvement in deviant behaviors (e.g. substance use), or biological changes that may make adolescents more prone to negative moods, especially in early adolescence (Cotterell 2007).

Multiple Social Support: Definition and Measurement Approaches

As mentioned earlier, multiple social support can be defined as perceived or enacted social interaction involving help, protection, and encouragement made available to individuals by two or more sources within personal social networks. Multiple social

support results may be analyzed from three different angles. Most of the studies in this field analyze the perceived influence of each social support source on a given outcome, regardless of the effects of other social support sources; these effects are also known as unique effects (Rueger et al. 2010). The second approach tests how total perceived multiple social support, meaning the total amount of social support provided by all sources, affects a given outcome. Here, multiple social support is measured as the sum of all social providers' support rates, which can then be used as a predictor of a given outcome.

The third perspective is a new one in the literature and has been labeled Multiple Social Support Attunement (MSSA) (blind for review). It focuses on how social support patterns, organized in terms of the degree of perceived consistency between multiple social support providers, based on each provider's support scores, will affect a certain outcome (Levitt et al. 2005). MSSA is based on the concept of attunement as a sense of unity in relationships (Erskine 1998). This attunement definition is applied to dyadic relationships such as psychotherapy (Erskine 1998) and has recently been extended to the social support literature to describe patterns of multiple supportive relationships. Patterns of perceived MSSA may take one of at least three forms: low MSSA involves low levels of support from all sources; unattuned MSSA occurs when the level of support is unbalanced across different providers; and high MSSA occurs when all providers offer high levels of support (blind for review).

A MSSA framework proposes that perceived consistency across different support providers is a result determined by multiple support enactment conditions. In short, the enactment process which leads to distinct levels of perceived attunement is understood as a performative component of MSSA, meaning that - just as with an orchestra - the support sources' interplay can be coordinated. This process is described according to a

bidirectional continuum from lesser to greater intentionality of sources to display consistent support efforts. The proposed continuum encompasses three different stages of intentionality: performance, improvisation, and rehearsal. Rehearsal is seen as an optimal stage of the attunement process, corresponding to greater intentionality of support consistency between distinct support sources and, thus, to a greater chance of support consistency being perceived and producing positive impacts in a given outcome. In improvisation consistency may be achieved across social support delivered by multiple sources, although no intentional effort is made to achieve it. Perfomance corresponds to a stage where social support sources act (perform) according to their script of values and beliefs, meaning that no efforts and intentions to coordinate social support enactement are made (blind for review).

The selection of support sources involved in MSSA assessment is driven by their relevance to the research goal, but also by the need to ensure uniformity among types of sources (groups or persons). Social psychology research has extensively demonstrated that although groups and persons are analyzed according to common cognitive mechanisms, their entitativity (meaning the degree to which a social entity is perceived as unique, coherent, and distinct from others) is different (Hamilton, Sherman, Way, & Percy, 2015). Support sources entitativity may, thus, influence multiple social support perceptions and is a central feature of an MSSA approach.

Multiple Social Support and Subjective Well-Being among Disadvantaged Youths

Multiple social support structure goes through important changes during adolescence (Cotterell 2007), affecting the frequency, intensity, and direction of SWB indicators, including among disadvantaged youths. Quality-of-life tends to be lower amid youths with clinical conditions; nevertheless, higher support provided by family

and friends predicts improved quality-of-life for these youths (Cassarino-Perez and Dell'Aglio 2015). Less seems to be known about the multiple social support associations with quality-of-life in the case of disadvantaged youths. Some studies show that multiple social support may have a buffering effect, by reducing the impact of social hardship on quality-of-life perceptions. For instance, social support provided by mothers and partners was found to have an identical weight in buffering the negative effect of adolescent pregnancy on low social-economic status girls' quality-of-life (Pires et al. 2014). Elsewhere, greater support delivered by teachers and peers reduced the negative effect of bullying on victims' quality-of-life compared to support delivered by only one of these sources or low support offered by both sources (Flaspohler et al. 2009).

Some studies have shown that lower support provided by parents, peers, and teachers overlaps with greater adolescent social anxiety (e.g. Sahranc et al. 2017). Greater total multiple social support from parents and peers has also been associated with lower adolescent social anxiety, but only peers' social support contributes to lowering social anxiety (Cavanaugh and Buehler 2016). Again, less is known about the associations between multiple social support and social anxiety among disadvantaged youths. Nonetheless, recent research shows a connection between higher social anxiety and lower support provided by mother, father, and best friend among at-risk delinquent youths, who are usually overrepresented across lower socioeconomic ranks, with each source of support contributing at a similar rate to social anxiety (Mercer et al. 2017).

Lower multiple social support is also linked to depressive symptoms. A recent meta-analytical review shows that familial sources, teachers, friends, and significant others seem pivotal in preventing depressive symptoms among adolescents (Rueger et al. 2016); although parental support seems more determinant for both boys and girls

(Rueger et al. 2010). Mixed trends have been found regarding the role of friends' support, with some studies finding a minimal impact in reducing depressive symptoms (Rueger et al. 2010), while others report the opposite (Rueger et al. 2016). Among disadvantaged youths, total MSS from family and friends has a protective role by reducing the negative impact of cumulative risk in depression (Patwardhan et al. 2017). Low friend support, along with total low MSS provided by family, friends, and significant others, was also found to be associated with a higher incidence of depression among adolescents from ethnic minorities (Khatib et al. 2013).

The connections between MSSA and the mentioned SWB indicators have been insufficiently studied among general youth groups and specific vulnerable groups.

Nevertheless, patterns of high social support from close family and friends have been linked to fewer internalization problems (including depression and anxiety) among early adolescents (Levitt et al 2005). The same trend was found among older lesbian, gay, bisexual, and transgender youths receiving consistently high support from family, friends, and significant others (McConnell et al. 2015).

Present Study

The literature review shows that: (a) gender disparities are contradictory regarding SWB outcomes, but girls seem more prone to develop anxiety and depression; (b) early adolescents seem at greater risk of developing poorer SWB; (c) MSSA effects on quality-of-life, social anxiety, and depression are mostly studied from the perspective of the impact of each support source (the unique effects' perspective); (d) greater support from multiple sources seems to improve the prospects of adolescent well-being; and (e) there are no studies relating MSSA patterns and disadvantaged youths' SWB.

This research therefore aims to understand to what extent structural factors such as gender and age, MSSA patterns, and the potential interaction between these factors, are related to disadvantaged youths' SWB in terms of quality-of-life, social anxiety in peer relationships and depression. MSSA covers three significant relationships: closest family member, mentor, and best friend.

It was expected that worse results across overall SWB indicators would be found among girls and early adolescents. No hypothesis was formulated regarding how different MSSA patterns could affect the connections between gender and age and well-being indicators, given the exploratory nature of this research.

Method

Participants

Two-hundred and thirty-six adolescents aged between 12 and 18 years old (M = 14.10; SD = 1.78; 60.20% boys) participated in this study. One-hundred and twenty-two (51.69%) identified themselves as African, 98 (41.53%) identified themselves as Portuguese, and the remaining 16 (6.77%) identified themselves with other ethnic groups. Most of the girls identified themselves as Portuguese (51.06%), while most of the boys identified themselves as African (57.04%). As for their level of education, 216 (88.95%) were enrolled in middle school (5th to 9th grade), 23 (9.75%) were enrolled in secondary school (10th to 12th grade), and 3 (1.30%) were enrolled in primary education (4th grade or below). One-hundred and seventy-three participants indicated their mother as the closest family member (73.31%), followed by 40 participants who indicated their father (16.95%), 11 (4.66%) who indicated their grandmother or grandfather, 8 (3.39%) indicated an aunt or an uncle, and the remaining 4 (1.69%) indicated a brother/sister.

Site

The study took place in the Lisbon Metropolitan Area. This region encompasses 18 municipalities of the Lisbon and Setúbal districts, which is the most populated area of Portugal. The Lisbon Metropolitan Area represents 37% of the Portuguese Gross Domestic Product (GDP). The per capita GDP in the region is set at 22 800 Euro. The Gini coefficient for this region is 33.90%, while the risk of poverty reached 12.40% of its population in 2014 (Instituto Nacional de Estatística 2017).

The Escolhas Program

The Escolhas, or 'Choices', program is a nationwide initiative, created in 2001, and run by the Portuguese Government, the High Committee for Migrations, the General Bureau of Education, and the Social Welfare Institute, in partnership with local organizations, co-funded by the European Union. The program's mission is to promote social inclusion, equal opportunities, and social cohesion among disadvantaged children and adolescents. Escolhas' specific goals are to improve youth education levels, transition to the labor market, civic participation, digital inclusion, and entrepreneurship. The participants' vulnerability depends on one or more of the following criteria: early school leaving; school failure; inactivity; deviant behavior; involvement in crime; being targeted for social services for protection reasons; having migrant, ethnic group or Roma people descent. The program is in its sixth edition and is focused on five actions: (a) educational inclusion and non-formal education; (b) professional training and employability; (c) civic participation; (d) digital inclusion; and (e) youth entrepreneurship.

Measures

Social support.

Social support was measured using the Portuguese version of the Basic Needs Satisfaction in Relationships Scale (BNSRS) (Simões and Alarcão 2013). The questionnaire is an adaptation of the original English version (La Guardia et al. 2000) and encompasses 9 items rated on a five-point Likert scale ranging from 1 (never) to 5 (always). The possible scores range from 9 to 45 points. The scale comprises nine affirmative items (e.g. When I am with him/her, I feel free to be who I am) covering issues of relatedness, competence and autonomy support; three of the items are reversed (e.g. When I am with him/her, I often feel inadequate or incompetent). The BNSRS assesses the satisfaction with social support in any targeted relationship, with higher scores indicating greater satisfaction with social support in a particular relationship. In this study, the BNSRS was used to calculate the separate scores of adolescents' appraisals of the social support levels offered by the family member (mother/father, sister/brother, others), with whom they lived and spent more time with, by their best friend, and by Escolhas program's mentor. The internal consistency of the BNSRS is adequate in both the original English version ($\alpha = .94$) (La Guardia et al. 2000) and the Portuguese version ($\alpha = .80$) for the whole scale (Simões and Alarção 2013). In this study, internal consistency was adequate and identical for closest family member, best friend, and mentor social support (α =.79).

Quality-of-life.

The KIDSCREEN-27 assesses quality-of-life in children/adolescents between 8 and 18 years of age (Ravens-Sieberer et al. 2007). The 27 items included in this instrument are organized into five dimensions. Physical Well-Being (5 items; sample

item: "Have you felt full of energy?") explores the level of the child's / adolescent's physical activity, energy and fitness. Psychological Well-Being (7 items; sample item: Has your life been enjoyable?) includes measures of positive emotions, satisfaction with life and emotional balance. Parent Relations & Autonomy (7 items; sample item: Have you been able to talk to your parent(s) when you wanted to?) examines relationships with parents, the atmosphere at home, feelings relative to age-appropriate freedom, and the degree of satisfaction with financial resources. Social Support & Peers (4 items; sample item: Have you had fun with your friends?) examines the nature of the respondents' relationships with other children/adolescents. Finally, School Environment (4 items; sample item: Have you got on well at school?) explores the child's/adolescent's perceptions of his/her cognitive capacity, learning and concentration, and feelings regarding school (Ravens-Sieberer et al. 2007). For each dimension, the respondents describe their perceptions during the previous week. Depending on their nature, the items are rated on a 5-point Likert scale of intensity or frequency ranging from 1 (nothing or never) to 5 (extremely or always). The wholescale scores range from 5 to 135 points, with higher scores denoting better perceived quality-of-life. In this work, KIDSCREEN-27 was used as a whole scale of quality-oflife with adequate internal consistency (α =.82) being similar to previous studies (α = .89) (Simões and Alarção 2014).

Social anxiety in peer relationships.

The Portuguese version (Pechorro et al. 2014) of the Social Anxiety Scale for Adolescents (SAS-A) (La Greca and Lopez 1998) was used to assess participants' social anxiety in peer relationships. The SAS-S includes 22 items organized in three dimensions; Fear of Negative Evaluation (eight items; sample item: I feel that people

talk about me behind my back); Social Avoidance and Stress-New (six items; sample item: I am shy when I meet new people); and Social Avoidance and Stress – General (four items; sample item: I keep quiet when I am in a group). The SAS-A also includes four neutral items, which are not added to scores. Items are rated on a 5-point Likert scale ranging from 1 (not at all) to 5 (every time). Whole scale scores range from 18 to 90 points; higher scores indicate higher levels of social anxiety. The SAS-A was used as a whole measure of social anxiety in peer relationships, with an adequate internal consistency (α =.90), similar to the values of studies using the original English version (α =.91) (La Greca and Lopez 1998) or the Portuguese version (α =.91) (Pechorro et al. 2014).

Depression.

Depression was measured using the Portuguese version (Carvalho et al. 2015) of the Center for Epidemiological Studies Depression Scale for Children (CES-DC) (Weismann, Orvaschel, & Padian, 1980). This questionnaire assesses depression in children and adolescents aged from 6 to 17 years old and encompasses 20 items (sample item: I felt low and unhappy) four of them reversed (sample item: I felt happy), covering emotional, cognitive and behavioral depressive dimensions. Items are rated on a 4-point Likert scale ranging from 0 (never) to 3 (frequently). For each dimension, the respondents describe their perceptions during the previous week. Total scores range from 0 to 60 points, with higher scores indicating higher levels of depressive symptoms. The level of internal consistency of the CES-DC was adequate in this study (α =.86), being similar to previous studies for the whole scale of the original English (α =.90) (e.g. Yang et al. 2004) and the Portuguese versions (Carvalho et al. 2015) (α =.90).

Procedures

The Escolhas program board was contacted to present the study aims and methodology, as well as to obtain an agreement to contact each project. Afterwards, 47 projects from 13 municipalities of the Lisbon area, corresponding to all Escolhas program active projects were contacted in this geographical area in 2017: 23 projects agreed to participate. After parental informed consent was obtained from the adolescents' legal guardians, a collective administration of the study's protocol was conducted in each project using an online survey tool. Data collection was supervised by the first author and involved an explanation of research goals, ethical principles (e.g. confidentiality norms), asking the participants for their voluntary consent to participate, and assisting in the online filling in of the protocol. The participants had 30 minutes to complete the survey. Data collection occurred between April and July 2017.

Data Analyses

Latent Class Analysis (LCA) was employed to categorize the participants on the basis of the degree of MSSA. LCA is a clustering mixture model in which the observed variables are independent categorical variables (Celeux and Govaert 2016). Recent developments have made it possible to perform LCA easing these assumptions. Latent Gold (version 5.1) software is fully developed to conduct LCA, with a number of advantages over other software packages: (a) modeling may include ordinal, continuous, and/or nominal variables; (b) local independence assumption between variables is not required to perform LCA in this program; and (c) exploring patterns of group membership may include all covariates at the same time. Thus, classification and class membership prediction grouping was simultaneously conducted in Latent Gold, avoiding prediction and measurement model reestimation (Vermunt 2010).

LCA involved a three-step approach using the software utilities and recommendations (Vermunt 2010). First, a LCA model was built based on social support measures for each of the selected support relationships. Second, participants were assigned to clusters based on their posterior class membership probabilities, meaning that covariates of social support measures identified in the zero-order correlations' matrix (gender and ethnicity) were included in the process of defining each participant membership probability. Fit indices that included the Bayesian information criteria (BIC), sample-size-adjusted BIC, and entropy statistics were compared to identify the model with the best fit. The validation of differences between MSSA groups was made through post-hoc mean comparison tests between social support measures for all regarded sources. Percentiles 25, 50, and 75 were estimated for each source of support, based on the participants' original ratings for closest family member, mentor, and best friend support, to facilitate class membership interpretation. Ratings < P25 indicated low social support; ratings between P25 and P49 indicated medium-low social support; ratings between P50 and P74 indicated medium-high social support; ratings above P75 showed high social support.

Finally, the associations between gender or age, MSSA, and outcome variables were investigated using SPSS 23.0. A Generalized Linear Model (GLM) approach, including gender (or age), and MSSA patterns in the model as factors, as well as ethnicity as a covariate in the case of the quality-of-life model, was followed to test independent effects. An omnibus test of between-factors independence was calculated, as well as the model fit. Afterwards, a second model testing the interaction term (e.g. GenderXMSSA patterns) was tested. Parameter estimates are reported for the models depicting independent effects for gender or age and MSS patterns, including covariates when necessary. Pairwise-mean differences for within gender and age groups are also

reported, with 95 % confidence intervals (95 % CI), based on Least Significance

Difference (LSD) post-hoc tests method. This decision is based on the interest in

exploring differences across gender and age subgroups, even when interaction between
these factors and MSSA is not significant.

Results

Descriptive Analysis

Percentiles were calculated to depict social support means distribution, with the following results: (a) closest family member support (P25 = 33.00; P50 = 39.00; P75 = 41.00); (b) mentor (P25 = 34.00; P50 = 39.00; P75 = 43.00); and (c) best friend (P25 = 33.00; P50 = 40.00; P75 = 45.00). Table 1 depicts zero-order correlations.

[Table 1]

Latent Class Analysis

According to Table 2, a four-classes model showed the best fit to the data, with a BIC of 4132.19, a sample–size-adjusted BIC of 4007.49, and an entropy score of .42. Although a four-classes solution presented a better global fit when all indicators were considered, the decision was to retain a three-classes solution, because one of the classes had a small number of members in the four-classes solution (n = 24). In addition, when the four classes were collapsed into gender or age subgroups, these subgroups included only a few participants (n < 10).

Tables 3 and 4 present the main descriptive statistics for each class. Class 1 (closest family member high support) (n = 111; 46.61%) was characterized by youth reports of middle high support (> P75) from closest family member (M = 38.91; SD = 2.92) and middle low support (> P50) from mentor (M = 38.72; SD = 4.43) and best friend (M = 38.87; SD = 4.61). This class showed a greater proportion of boys (n = 62;

55.90%), early adolescents (\leq 14 years old) (n = 67; 60.40%) and African participants (n = 61; 50.00%). Class 2 (low MSSA) (n = 66; 27.97%) was characterized by youth reports of low support (< P25) from closest family member (M = 29.97; SD = 4.14), mentor (M = 32.72; SD = 5.35), and best friend (M = 32.26; SD = 6.15). This class showed a greater proportion of boys (n = 53; 80.30%), early adolescents (\leq 14 years old) (44; 66.70%), and African participants (n = 48; 72.70%). Class 3 (high MSSA) (n = 59; 25.00%) was characterized by youth reports of high support (> P75) from closest family member (M = 41.57; SD = 1.38) and mentor (M = 42.75; SD = 2.41), and middle high support (> P50) from best friend (M = 44.78; SD = .45). This class showed a greater proportion of girls (n = 32; 54.20%), early adolescents (\leq 14 years old) (n = 43; 72.90%) and Portuguese participants (n = 41; 69.50%). Differences between all the support variables were significant across the three classes (p < .001), according to Scheffe post-hoc tests.

High MSSA presented a higher estimate of average quality-of-life (M = 106.54; SD = 7.78) and lower average rates of social anxiety (M = 42.85; SD = 15.20) and depression (M = 13.37; SD = 8.71), compared to other classes (see Table 5).

[Tables 2 to 5]

General Linear Model and Multiple Mean-Pairwise Comparisons

Gender, multiple social support patterns and well-being outcome models.

A GLM including quality of-life as an outcome variable, with gender and MSSA patterns entering in the model as factors, while age and ethnicity were included as covariates, was significant, $Wald \chi 2$ (5, 231) = 71.36, p < .000. According to the results presented in Table 6, closest family high support (p < .01) and low MSSA were associated with worse quality-of-life (p < .01), in comparison to high MSSA.

Subsequent pairwise comparisons across categories of boys and girls, regarding the depicted MSS patterns, were significant, $Wald \chi 2$ (5, 231) = 58.40, p < .000. According to Table 7, boys reporting closest family member high support showed significantly better quality-of-life rates than those reporting low MSSA (p < .001). In turn, boys in the low MSSA class denoted lower quality-of-life compared to those included in the high MSSA class (p < .01). Conversely, girls included in closest family member high support evidenced significantly higher quality-of-life mean rates than those included in the low MSSA (p < .01), but also worse quality-of-life rates compared to girls included in high MSSA class girls (p < .01) classes. In addition, girls included in the low MSSA class presented significantly lower average quality-of-life rates compared to those include in the high MSSA class (p < .001).

An identical model including the interaction term between age and MSSA as a factor, was shown to be significant, Pearson $\chi 2$ (8, 228) = 106.57, p < .000. The omnibus test of independence between gender and MSSA patterns, including their interaction, was also significant, $Wald \chi 2$ (7, 229) = 75.62, p < .000. Only MSS patterns displayed a significant independent effect on quality-of-life (p < .001).

A GLM including social anxiety as an outcome variable, with gender and MSSA patterns entering in the model as factors, was significant, Pearson $\chi 2$ (4, 232) = 197.72, p < .000. According to the results presented in Table 7, girls denoted higher social anxiety rates (p < .001). Participants reporting low MSSA also denoted significantly greater social anxiety (p < .001), in comparison to those reporting high MSSA. Multiple mean-pairwise comparisons reveal that boys reporting closest family member high support denoted lower social anxiety mean rates than boys in the low MSSA class (p < .005). Conversely, boys reporting low MSSA showed higher social anxiety compared to those included in a high MSSA class (p < .001). In the case of girls, only those reporting

low MSSA denoted significantly higher mean rates of social anxiety compared to girls reporting high MSSA (p < .001).

An identical model entering gender and MSSA interaction term was also shown to be significant, Pearson $\chi 2$ (6, 230) =196.58, p < .000. The omnibus test of independence between gender and MSSA patterns, including their interaction, was also significant, $Wald \chi 2$ (7, 229) = 22.90, p < .000. Gender (p < .001) and MSS patterns (p < .001) displayed a significant independent effect on social anxiety, contrary to their interaction.

A GLM including depression as an outcome variable, with gender and MSSA patterns entering in the model as factors, was shown to be significant, Pearson χ^2 (4, 232) = 82.49, p < .001. According to the results presented in Table 7, girls denoted higher depression estimates (p < .01). Participants reporting closest family member high support (p < .01) and low MSSA (p < .001) also denoted significantly greater depression estimates (p < .001), in comparison to those reporting high MSSA. Pairwise-mean comparisons show boys reporting closest family member high support presented lower depression mean rates compared to boys included in low MSSA (p < .001). The later showed significantly higher mean rates than boys included in the high MSSA class (p < .001). Girls included in the closest family member high support presented significantly lower depression mean rates compared to girls in the low MSSA class (p < .01). The same trend was evident for girls in the low MSSA group, when compared to girls in the high MSSA class (p < .001). Finally, girls in the closest family member class display lower depression mean rates than girls in the high MSSA (p .05).

An identical model including gender and MSSA patterns interaction term as a factor, was also shown to be significant, Pearson $\chi 2$ (6, 230) =82.22, p < .000. The omnibus test of independence between gender and MSSA patterns, including their interaction, was also significant, $Wald \chi 2$ (5, 231) = 41.38, p < .000. Gender (p <.01)

and MSS patterns (p < .001) displayed a significant independent effect on depression, contrary to their interaction.

Age, multiple social support patterns and well-being outcome models.

A GLM including quality-of-life as an outcome variable, with age and MSSA entering in the model as factors, while ethnicity was included as a covariate identical model, was significant, Pearson $\chi 2$ (5, 231) = 98.06, p < .000. According to the results presented in Table 8, early adolescents denoted higher quality-of-life estimates. Moreover, closest family high support was associated with greater quality-of-life (p < .01), contrary to low MSSA (p < .001), in comparison to high MSSA. According to Table 9, early adolescents reporting closest family member high support showed significantly better quality-of-life rates than those reporting low MSSA (p < .001). In turn, early adolescents in the closest family member high support (p < .01) and in the low MSSA (p < .001) classes also denoted lower quality-of-life mean rates compared to those included in the high-coordinated MSS class. Conversely, older adolescents included in closest family member high support presented significantly higher quality-of-life mean rates than those included in the low MSSA (p < .01). Additionally, older adolescents included in the low MSSA class presented significantly lower average quality-of-life rates compared to those include in the high MSSA class (p < .001).

A similar model including the interaction term between age and MSSA patterns, was shown to be significant, Pearson $\chi 2$ (7, 229) = 98.86, p < .000. The omnibus test of independence between age and MSSA patterns, including their interaction, was also significant, $Wald \chi 2$ (6, 230) = 70.02, p < .000. Age (p < .001) and MSS patterns (p < .001) displayed a significant independent effect on quality-of-life, contrary to their interaction.

A GLM including social anxiety as an outcome variable, with age and MSSA patterns entering in the model as factors, was significant, Pearson $\chi 2$ (4, 232) = 203.32, p < .000. According to the results for this model presented in Table 8, early adolescents reporting low-coordinated MSS also denoted significantly greater social anxiety (p < .01), in comparison to those reporting high-coordinated MSS. Multiple mean pairwise comparisons reveal that early adolescents reporting closest family member high support showed lower social anxiety mean rates than early adolescents in the low-coordinated MSS class (p < .001). Conversely, early adolescents reporting low-coordinated MSS presented higher social anxiety compared to those included in a high-coordinated MSS class (p < .001). No significant pairwise-mean comparisons were found for older adolescents.

An identical model including the interaction term between age and MSSA patterns, was shown to be significant, Pearson $\chi 2$ (6, 230) =201.71, p < .000. The omnibus test of independence between age and MSS patterns, including their interaction, was also significant, $Wald \chi 2$ (5, 231) = 16.82, p < .000. MSS patterns (p < .001) displayed a significant independent effect on social anxiety, contrary to age and the interaction between the two factors.

A GLM including depression as an outcome variable, with and MSSA patterns entering as factors, was significant, Pearson $\chi 2$ (4, 232) = 85.80, p < .001. According to the results presented in Table 8, participants reporting closest family member high support (p < .05) and low MSSA (p < .001) denoted significantly greater depression estimates, compared to those reporting high MSSA. Pairwise-mean comparisons show early adolescents reporting closest family member high support presented lower depression mean rates compared to those included in low MSSA (p < .01), contrary to significantly higher depression mean rates when compared to high MSSA (p < .05).

Furthermore, low MSSA early adolescents showed significantly higher depression mean rates than those included in the high MSSA class (p < .001). In turn, older adolescents in the low MSSA group showed higher depression rates, when compared to older adolescents in the high MSSA class (p < .001).

A similar model including the interaction term between age and MSSA patterns was shown to be significant, Pearson $\chi 2$ (6, 230) =86.29, p < .000. The omnibus test of independence between age and MSSA patterns, including their interaction, was also significant, $Wald \chi 2$ (5, 231) = 29.99, p < .000. MSSA displayed a significant independent effect on depression (p < .001), contrary to age as well as age and MSSA interaction.

Discussion

The aim of this research was to understand to what extent structural factors such as gender and age, MSSA patterns, and the potential interaction between these factors is related to disadvantaged youths' SWB. It was expected that worse quality-of-life, social anxiety, and depression rates would be found among girls and early adolescents. No hypotheses were formulated regarding the links between MSSA patterns and the selected well-being indicators, given the novelty of this research topic. Five key findings uphold, in part, the hypothesis and shed some light on the influence of MSSA on disadvantaged youths' SWB.

After conducting LCA, a three-classes solution was retained to obtain an interpretable solution that would also allow unbiased comparisons between MSSA patterns. According to a three-classes solution, one of the patterns denoted high closest family member support; a second class was marked by a pattern of low MSSA; finally, a third class showed a pattern of high MSSA. These results are sustained by previous

findings in studies with general groups of early adolescents, showing that balanced and unbalanced MSSA patterns are evident during this developmental period (Levitt et al. 2005). It is also remarkable that the most common MSSA pattern in this study was that demonstrating closest family member support. This may be due to the fact that the research protocol did not focus on a specific family support source, enabling participants to choose significant familial relationships that were not a source of conflict (Cotterell 2007).

Gender was not associated with greater quality-of-life; however, girls denoted higher social anxiety and depression rates, as hypothesized. Previous findings show mixed trends regarding gender differences on quality-of-life outcomes (Matos et al. 2017; Tremolada et al. 2016), but most of these findings were obtained with clinically vulnerable groups. This means that gender trends among disadvantaged youths are less well-known. Nonetheless, disadvantaged boys' and girls' greater exposure to risks, such as involvement with deviant peers, substance use, or lower levels of physical activity may attenuate gender differences, especially when quality-of-life measures are multidimensional, as is the case with Kidscreen questionnaires. In turn, greater social anxiety and depression rates among girls are more consistent with general gender comparisons (Chaplin et al. 2009), and with recent studies focused on disadvantaged youth groups (e.g. Patwardhan et al. 2017). Girls' greater vulnerability to anxiety and depression arises from various factors, such as their earlier experience of normative negative feelings or greater involvement in social relationships, leading to greater dependence and a higher number of conflicts when compared to boys (Cotterell 2007; Cummings et al. 2013).

Thirdly, younger participants presented higher rates of quality-of-life, but age was not related to negative SWB indicators as expected. In general, early adolescence

involves an increment of social anxiety and depression, which tends to be attenuated during adolescence (Dalrymple and Zimmerman 2011). This contradictory finding may be justified by contextual reasons: compared to older disadvantaged adolescents, disadvantaged early adolescents may have been less exposed to enduring social, economic hardships and to concurrent social development risks. These risks are more often present among socially vulnerable groups, leaving more room for improved quality-of-life. It is also feasible that sampling procedures biased these results, with more deviant and potentially more ill-being older adolescents not adhering to the Escolhas program and ultimately to this study. Moreover, older adolescents may be more aware of the challenges involved in the transition to early adulthood, being more prone to show worse quality-of-life. In any case, the unbalanced numbers of younger and older participants recommend careful consideration of age relationships with SWB, in this study.

Fourthly, high MSSA proved to be an optimal MSSA pattern in terms of promoting greater SWB in terms of greater quality-of-life, lower social anxiety, and lower depression among disadvantaged youths. This result develops the work of at least two studies (Levitt et al. 2005; McConell et al. 2015), showing that greater MSSA contributes to improved adjustment. In the current study case, MSSA between adults and peers is also relevant in producing better SWB prospects. More importantly, the connections between high MSSA and SWB indicators were more generalized, systematic, and greater than the ones found between gender or age and the same indicators. Thus, this result stresses the importance of greater multiple social support among disadvantaged youths pointed out by a significant body of studies (Chaturvedi and Kumari 2016; Mercer et al. 2017; Rueger et al. 2010), adding the relevance of MSSA for the SWB in socially disadvantaged groups to the literature.

Finally, interaction between age or gender and MSSA patterns were not significant, meaning that these factors show independent paths in their associations with quality-of-life, social anxiety, and depression. However, exploratory pairwise-mean comparisons of the interaction between gender or age and MSSA led to some additional findings. While patterns of results for boys and girls across MSSA classes were similar, early adolescents in closest family member or high MSSA patterns tended to display better quality-of-life perspectives, as well as lower social anxiety and depression rates, compared to early adolescents reporting low MSSA, a trend which was not found for older adolescents. Although exploratory, these results indicate the importance of family support or greater MSSA in the transition to adolescence, in socially deprived environments.

Implications and Limitations

This study suggests that MSSA patterns play a significant role in the production of SWB. From a practical standpoint, community, educational, or social skills training programs seem to benefit from better integrating its assessment, as well as activities to improve MSSA. Assessment may be improved at screening stages by using social network maps or other tools to identify youths' most significant relationships and by investigating social support provided by different sources, through interviews and questionnaires. Screening procedures may also have to take into account greater well-being risks shown by girls. From an intervention standpoint, it may also be important to invest in cross-generational activities, to help support sources from different generations to build positive ties, which can be translated into intentional support attunement.

From a research standpoint, longitudinal studies aiming to clarify gender, age, and MSSA connections and potential interaction, as well as their influence on SWB may be

particularly informative. Further mixed-method studies may also address how the MSSA enactment process (in terms of higher/lesser intended consistency) comes to affect the results of social support patterns. Moreover, it is important to detail how patterns of specific dimensions of social support (e.g. emotional support) may come to affect SWB outcomes among vulnerable youths. Finally, the assessment of future orientation or optimism may help to better understand the differences between younger and older adolescents regarding SWB.

This study has limitations that need to be mentioned. The access to youths was mediated by the program. Although a protocol for contact and obtaining informed consent was made available, contacts may have not followed the same procedure across each of the projects taking part in the program. Age distribution is unbalanced across MSSA patterns. Multi-informants are also required in future studies.

Conclusion

This study demonstrates that MSSA has connections with disadvantaged youths' SWB in terms of quality-of-life, social anxiety, and depression that are independent of age and gender. These associations are more generalized and systematic than the links between gender or age and the selected SWB indicators. High MSSA is an optimal pattern, regarding the improvement of these youths' SWB prospects. Exploration of interaction between gender, age, and MSSA patterns through pairwise comparisons show that high MSSA is more systematically associated with improved SWB among early adolescents.

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Table 1. Zero-order correlations between study variables

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Gender											
2. Age	11										
3. Ethnicity	.15**	.11									
4. Educational level	.06	23**	.09								
5. Closest family member social support	14*	09	16*	.03							
6. Mentor social support	28**	.05	05	05	53**						
7. Best friend social support	16*	.08	15**	09	39**	.46**					
8. Multiple social support patterns	04	11	10	21**	.18**	.28**	.27**				
9. Quality-of-life	02	28**	16*	.04	.50**	.32**	.21**	.42**			
10. Social Anxiety	10	06	.03	.07	.18**	15**	12	20*	.07		
11. Depression	08	.02	.01	.03	32**	25**	29**	26**	22**	.55**	

^{*}p <.05 ** p <.01

Table 2. Fit indices for one-, two-, three- and four-latent class solutions for latent class analysis

Fit indices	One-cluster solution	Two-clusters solution	Three-clusters solution	Four-clusters solution
BIC	4520.71	4232.93	4178.48	4132.19
Sample-size adjusted BIC	4499.39	4177.52	4088.42	4007.49
Entropy		.17	.46	.42

Note: BIC – Bayesian Information Criteria

Table 3. Means (and standardized errors) for social support variables for the four-clusters latent class analysis solution

Supports	High closest	Low-coordinated	High-coordinated	Clusters differences <i>F</i> (3, 233)
	Family member support	MSS	MSS	
	(n = 111)	(n = 66)	(n=59)	
Closest family member	38.91 (2.92)	29.97 (4.14)	41.57 (1.38)	264.17***
Mentor	38.72 (4.43)	32.72 (5.35)	42.75 (2.41)	86.29***
Best friend	38.87 (4.61)	33.26 (6.15)	44.78 (.45)	99.95***

^{***} p <.001

Note: All paired mean comparisons showed significant differences on the basis of post-hoc Scheffé tests

Table 4. Descriptive information for each cluster of multiple social support patterns

Variables	High closest	Low-coordinated	High-coordinated	Clusters differences F (3, 233)
	Family member support	MSS	MSS	
	(n = 111)	(n = 66)	(n = 59)	
Gender				χ2 (2,234) = 17.14***
Girls	49 (44.10%)	13 (19.70%)	32 (54.20%)	
Boys	62 (55.90%)	53 (80.30%)	27 (45.80%)	
Age				
≤ 14 years old	67 (60.40%)	44 (66.70%)	43 (72.90%)	$\chi^2(2,234) = 2.74**$
≥ 15 years old	44 (39.60%)	22 (33.30%)	16 (27.10%)	
Ethnic group				χ^2 (4, 232) = 35.55***
Portuguese	40 (36.00%)	17 (25.80%)	41 (69.50%)	
African	61 (50.00%)	48 (72.70%)	5 (22.00%)	
Other	10 (9.00%)	1 (6.30%)	5 (8.80%)	

^{**} *p* <.01; *** *p* <.001

Table 5. Means and standard deviations for each cluster of multiple social support patterns

Outcome variable	High closest	Low-coordinated	High-coordinated
	Family member support $(n = 111)$	MSS $(n = 66)$	MSS (n = 59)
	M (SD)	M (SD)	M (SD)
Quality-of-Life	100.21 (9.33)	93.14 (13.44)	106.54 (7.78)
Social anxiety	43.52 (12.66)	50.52 (15.82)	42.85 (15.20)
Depression	17.05 (8.36)	22.42 (10.97)	13.37 (8.71)

Table 6. Unstandardized parameter estimates of the associations of gender and MSSA with age and ethnic group as covariates

	Quality-of-l	ife		Social ar	nxiety		Depression	1	
Factors	В	S.E.	95% C. I.	В	S.E.	95% C. I.	В	S.E.	95% C. I.
1. Gender ^a	-1.67	1.36	(-4.35, 1.01)	5.25**	1.93	(1.48, 9.03)	3.83**	1.24	(1.40, 6.28)
2. MSSA/closest family member high support b	-5.39**	1.62	(-8.57, -2.20)	1.21	2.25	(-3.31, 5.62)	4.06**	1.46	(1.21, 6.91)
3. $MSSA^b$	-13.21***	1.84	(-16.83, -9.59)	9.48**	2.58	(4.42, 14.55)	10.38***	1.67	(7.11, 13.65)
5.Age	-5.98***	1.36	(-8.65, -3.31)						
6. Ethnic group ^c	-1.26	1.09	(-3.41, .90)						

** p < .01; *** p < .001Note: reference categories: a. boys; b. high MSSA; c. African participants.

Table 7. Post-hoc comparisons between interaction categories of GenderXMSSA for each of the outcome variables

	Quality-of-life	Social anxiety	Depression
1.	12.97*** (7.04, 18.90)	-9.02* (-17.48,56)	-10.36*** (-15.83, -4.89)
2.	-3.56 (-7.95, .83)	-2.83 (-9.00, 3.33)	-3.41 (.58, 7.40)
3.	-16.53*** (-22.79, -10.27)	17.04*** (7.88, 26.20)	13.77*** (8.00, 19.54)
4.	5.84** (2.28, 9.39)	4.68 (70, 10.06)	-4.90** (-8.18, -1.62)
5.	-6.96** (-11.40, -2.51)	-4.34 (-12.74, 4.06)	4.52* (.48, 8.57)
6.	-12.79*** (-17.35, -8.24)	12.70*** (6.28, 19.11)	5.87** (1.94, 9.80)

^{1.}Boys/Closest family member supportXBoys low MSSA; 2. Boys/Closest family member supportXBoys/high MSSA; 3. Boys/low MSSAXBoys/high MSSA; 4.Girls/Closest family member supportXGirls/high MSSA; 6. Girls/low MSSAXGirls/high MSSA.

Table 8. Unstandardized parameter estimates of the associations of age and MSSA with ethnic group as a covariate

	Quality-of-l	ife		Social an	nxiety		Depress	ion	
Factors	В	S.E.	95% C. I.	В	S.E.	95% C. I.	В	S.E.	95% C. I.
1. Age ^a	6.21***	1.35	(3.55, 8.85)	1.68	1.94	(-2.13, 5.49)	28	1.26	(-2.75, 2.20)
2. MSSA/closest family member high support ^b	-5.24**	1.63	(-8.43, -2.06)	.88	2.29	(-3.60, 5.938)	3.63*	1.49	(.72, 6.55)
3. MSSA ^b	-12.12***	1.80	(-16.21, -9.15)	7.77**	2.53	(2.80, 12.74)	9.03*	1.65	(5.81, 12.26)
4. Ethnic group ^d	93	1.10	(-3.08, 1.23)						

^{*}*p* <.05; ** *p* <.01; *** *p* <.001

Note: reference categories: a. Participants aged \geq 15 years old; b. high MSSA; c. African participants.

Table 9. Post-hoc comparisons between interaction categories of ageXmultiple social support patterns for each of the outcome variables

	Quality-of-life	Social anxiety	Depression
1.	7.08*** (3.36, 10.81)	-10.04*** (-15.37, -4.71)	-5.69** (-9.18, -2.20)
2.	-5.60** (-9.42, -1.78)	.12 (-5.25, 5.49)	4.22* (.71, 7.74)
3.	-12.68*** (-16.88, -8.49)	10.55** (2.53, 18.57)	9.91*** (6.06, 13.77)
4.	8.05** (3.03, 13.06)	-1.11 (-8.29, 6.06)	-4.77 (-9.47, .08)
5.	-4.52 (-10.16, 1.12)	1.64 (-6.38, 9.66)	2.15 (-3.09, 7.40)
6.	-12.57*** (-18.91, -6.23)	2.76 (-6.27, 11.78)	6.93* (1.02, 12.83)

^{1.} Participants aged \leq 14 years old/Closest family member supportXParticipants aged \leq 14 years old/low MSSA; 2. Participants aged \leq 14 years old//Closest family member supportXParticipants aged \leq 14 years old//low MSSAXParticipants aged \leq 14 years old//low MSSAXParticipants aged \leq 14 years old//low MSSA; 4. Participants aged \geq 15 years old/Closest family member supportX Participants aged \geq 15 years old/low MSSA; 5. Participants aged \geq 15 years old//Closest family member supportXParticipants aged \geq 15 years old//low MSSAXParticipants a