Manuscript Details

Manuscript number	CYSR_2020_831
Title	Resilience and the variables that encourage it in young sub-Saharan Africans who migrate
Article type	Research paper

Abstract

Background: The migratory process in young Sub-Saharans seems to produce important psychopathological alterations. However, the assessment of protective factors that modulate a resilient adaptation has been scarcely studied. Purpose: To assess the level of resistance of young sub-Saharan immigrants who recently migrated to Spain in an irregular situation. Methods: One-hundred-fifty-four young Sub-Saharan immigrants were recruited, all males aged 18 and 22 years old (mean age, 19.33 ± 1.28 years). Participants were divided into two subgroups according to the level of resilience measured with the RS-14. Multiple socio-demographic variables, risk variables (anxiety and depression), and protective variables (optimism, hope, general self-efficacy, and social support) were assessed. Results: The anxiety and depression detected among young sub-Saharan immigrants suggest low resilience and mental health problems in this group. In the high resilience group, the highest positive correlations were between resilience and optimism and resistance and self-efficacy, and there were inverse correlations between depression and hope and anxiety and social support. The most predictive variables of resilience for those young Sub-Saharans were self-efficacy, hope, social support, religion, and employment. Conclusions: One of the most important contributions of this study is to consider resilience as an important and effective tool for mental health, and more specifically, in immigrant youth. It is essential to prioritize some modulating factors in young Sub-Saharan Africans in order to promote resilient and non-psychopathological outcomes related to anxiety and depression.

Keywords	resilience; youth; sub-Saharan migrants; socio-demographic variables
Taxonomy	Child Mental Health, Homeless Youth, Risk Assessment
Manuscript category	Children and Youth Services Review, General

Corresponding Author	José Antonio Camacho-Conde
Corresponding Author's Institution	University of Málaga
Order of Authors	David Sánchez-Teruel, Auxiliadora Robles-Bello, José Antonio Camacho-Conde

Suggested reviewers	José María Prados Atienza, María Dolores Vallellano, Víctor Tejedor Hernández, José Aparecido da Silva, Miguel Galeote

Submission Files Included in this PDF

File Name [File Type]

Abstract.docx [Abstract]

TITLE PAGE.docx [Title Page (with Author Details)]

Resilience and variables_blinded.docx [Manuscript (without Author Details)]

declaration-of-competing-interests.docx [Conflict of Interest]

To view all the submission files, including those not included in the PDF, click on the manuscript title on your EVISE Homepage, then click 'Download zip file'.

Research Data Related to this Submission

There are no linked research data sets for this submission. The following reason is given:
Data will be made available on request

Resilience and variables that encourage it in young sub-Saharan people Africans who migrate

Abstract

The migratory process in young Sub-Saharans seems to produce important psychopathological alterations. However, the assessment of protective factors that modulate a resilient adaptation has been scarcely studied. **Purpose:** To assess the level of resistance of young sub-Saharan immigrants who recently migrated to Spain in an irregular situation. **Methods:** One-hundred-fifty-four young Sub-Saharan immigrants were recruited, all males aged 18 and 22 years old (mean age, 19.33 ± 1.28 years). Participants were divided into two subgroups according to the level of resilience measured with the RS-14. Multiple socio-demographic variables, risk variables (anxiety and depression), and protective variables (optimism, hope, general self-efficacy, and social support) were assessed. **Results:** The anxiety and depression detected among young sub-Saharan immigrants suggest low resilience and mental health problems in this group. In the high resilience group, the highest positive correlations were between resilience and optimism and resistance and self-efficacy, and there were inverse correlations between depression and hope and anxiety and social support. The most predictive variables of resilience for those young Sub-Saharans were self-efficacy, hope, social support, religion, and employment. **Conclusions:** One of the most important contributions of this study is to consider resilience as an important and effective tool for mental health, and more specifically, in immigrant youth. It is essential to prioritise some modulating factors in young Sub-Saharan Africans in order to promote resilient and non-psychopathological outcomes related to anxiety and depression.

Keywords: Resilience; youth; sub-Saharan migrants; socio-demographic variables.

TITLE PAGE

Resilience and the variables that encourage it in young sub-Saharan Africans who migrate

Sánchez-Teruel, D., PhD[a]; Robles-Bello, MA., PhD[b*]; Camacho-Conde, JA., PhD[c]

[a] Area of Personality, Assessment and Psychological Treatment, Department of Psychology, University of Cordoba, Cordoba, Spain
[b*] Department of Evolutionary and Educational Psychology, Faculty of Psychology, University of Jaen, Jaen, Spain
[c] Department of Medicine and Dermatology, Faculty of Medicine, University of Malaga, Malaga, Spain

*** Correspondence:**
María Auxiliadora Robles-Bello PhD
University of Jaén
Faculty of Humanities and Education Sciences
Department of Psychology
Area of Developmental Psychology and Education
Humanities and Education Sciences Building II (C5), Office: 223
23071 Jaén
Tel.: +34 953 21 17 21
marobles@ujaen.es

Short title: **Resilience and other variables in young sub-Saharan inmigrants**

Resilience and the variables that encourage it in young sub-Saharan Africans who migrate

In some European countries, such as Spain, immigration has increased in recent decades, with the majority of immigrants being minors from sub-Saharan Africa (Hidalgo, Peralta, Robles, Vilar, & Pérez, 2009). The National Statistics Institute (NSI, 2018) recorded that the immigrant population in Spain was now 4,418,898, of whom 37.98% (1,678,467) were sub-Saharan, being the second largest group of foreigners from non-EU areas (Andalusian Permanent Observatory of Migration-OPAM, 2018).

There is evidence that immigrants show a higher degree of psychological alterations than natives due to their transit process, with a high degree of depressive (Foo et al., 2018) or anxiety (Bustamante, Cerqueira, Leclerc, & Brietzke, 2018) symptoms. The migratory process is an adverse situation that promotes a high level of stress, as well as some mental disorders due to the rejection and hostility of the host country, lack of social support, economic problems, and language difficulties, among others (Korenblum et al., 2005). For Ballús and Viel (2009), immigration implies a situation of mourning, understood as a massive loss of bonds, pain, and frustration, which can lead to suffering symptoms of anxiety and depression.

Also, the most vulnerable groups, such as children and young people, also develop a strong sense of social uprootedness that can lead to emotional disturbance (Elgorriaga et al., 2019). In this sense, young immigrants (compared to immigrant children) tend to be more likely to develop feelings of loneliness, sleep disorders, eating problems, and social maladjustment (Ballús & Viel, 2009). However, studies have also been found in which part of the immigrant population presents a high degree of resilience and resilience after exposure to this adaptation process (Alegría, Álvarez, & DiMarzio, 2017; Utsey, Giesbrecht, Hook & Stanard, 2008). Specifically, there are encouraging results on the modulation of social support

(Logie et al., 2016) and self-efficacy (Straiton, Ledesma, & Donnelly, 2017) in people who have gone through the migratory processes. It also appears to be that emotional variables, such as hope, are key modulators in the process of resilience (Hashemi-Aliabadi, Jalali, Rahmati, & Nader, 2020). Hope refers to a positive motivational state based on a sense that is interactively derived from self-efficacy (energy directed to goals) and successful trajectories (planning to achieve goals) (Herth, 1992), which can directly affect the mental health of the migrant (Tarhan, Bacanlı, Dombayci & Demir, 2011).

Resilience is the result of a process of interaction between internal and external protective factors that leads to an improvement in the person's positive adaptation to an adverse situation (Fletcher, & Sarkar, 2013; Masten, 2014; Author, 2014). However, the internal and external protective factors that promote greater or lesser resilience are modulated by some socio-demographic and psychosocial variables and also depend on the sociocultural modulation of the type of adverse situation suffered (Authors, 2016). In fact, the type of adverse situation experienced activates the interaction of specific protective factors (internal and external) in a differentiated way, to produce diverse results (Heather, Morton, Nadal, & Smith, 2019; Mhongera & Lombard, 2020). Hence, knowing the protective factors activated after a migration process could help to propose public policies more adapted to this adverse situation, in order to produce a resilient outcome. However, after a migration process, it has not been sufficiently analysed which protective factors could predict a resilient rather than a psychopathological outcome.

Therefore, the objective would be to test whether differences exist between the resistant and non-resistant young immigrant population and also to investigate which sociodemographic and psychosocial variables predict a higher level of resistance in young Sub-Saharan immigrants. As a result, it is expected that resilient Sub-Saharan youth will have

lower levels of anxiety and depression and, in addition, that social support, self-efficacy, and hope are important predictors of their high level of resilience.

METHOD

Participants

The sample was composed of 326 sub-Saharan immigrants, with an average age of 19.63 years and a standard deviation (SD) of 1.13. It is worth noting that all of the immigrants arrived in Spain in an irregular situation when they were minors (between 13 and 15 years old). They were divided into two groups according to their level (low or high) of resilience measured by the 14-item Resilience Scale (Wagnild, 2009), adapted to the Spanish population by Author (2014) (RS-14), which measures the level of resilience to adverse situations with seven response options, ranging from "strongly disagree" to "strongly agree". In the original Spanish study, we obtained an adequate internal consistency measured by Cronbach's alpha (0.79) and a good criterion validity calculated with other resilience measures (CD-RISC by Connor and Davidson, 2003) ($r = 0.87$; $p < 0.001$). In addition, a good inverse correlation was also obtained with depression ($r = -0.79$, $p < 0.01$) and trait anxiety ($r = -0.64$, $p < 0.01$). Two groups were obtained, one of 154 young Sub-Saharan immigrants with high resilience, all men between 18 and 22 years old, with a mean of 19.33 and a SD of 1.28, and another group of 172 young immigrants with low resilience, also all men between 18 and 23 years old, with a mean of 20.1 and a SD of 1.06. All participants were asked for their written informed consent before participating in this research. A favourable report was obtained from the second author's University Research Ethics Committee. One variable that was not measured, but for which information was requested, was the age at which they arrived in Spain. The socio-demographic characteristics of both samples can be observed in Table 1. As can be observed, in the socio-demographic variables, there were no significant differences between

the groups (young immigrants with high and low resilience), with the exception of the variable studies and religion. Regarding the magnitude of the effect, a statistical power (eta square) was obtained between 0.65 and 0.90.

Table 1. Description of socio-demographic data for both samples.

	HRG n(%)	LRG n(%)	Contrast	g.l.	η^2
Age range					
18-19	51 (33.1)	57 (33.1)			
20-21	47 (30.5)	63 (36.6)	3.67^{ns}	2	.72
22-23	56 (36.4)	52 (30.2)			
Marital status					
Single	150 (97.4)	168 (97.7)			
Married	4 (2.6)	3 (1.7)	2.31^{ns}	2	.77
Other	0 (0)	1 (0.6)			
Coexistence					
Only	28 (18.1)	27 (15.7)			
Couple	61 (39.6)	67 (38.9)	$.48^{ns}$	3	.84
Friends	58 (37.8)	69 (40.2)			
Parents	7 (4.5)	9 (5.2)			
Level of studies					
None	11 (7.1)	43 (25.1)			
Basic	68 (44.2)	46 (26.7)	4.32^{*}	3	.90
Grade /Baccalaureate	63 (40.9)	79 (45.9)			
University	12 (7.8)	4 (2.3)			
Occupation					
None	56 (36.4)	61 (35.5)			
Internships	62 (40.3)	59 (34.3)	3.67^{ns}	2	.82
Work	36 (23.3)	52 (30.2)			
Religion					
Believer	9 (5.8)	36 (20.9)			
Practitioner	36 (23.4)	12 (6.9)	.23**	3	.85
Believer and practitioner	107 (69.5)	10 (5.9)			

Atheist	2 (1.3)	114 (66.3)			
Stressful situation (year)					
Yes	71 (46.1)	80 (46.5)	1.19^{ns}	1	.65
No	83 (53.9)	92 (53.5)			
Physical problems					
Yes	70 (45.5)	81 (23.3)	3.56^{ns}	1	.73
No	84 (54.5)	91 (76.7)			
Psychological problems					
Yes	7 (4.5)	9 (5.2)	4.32^{ns}	1	.69
No	147 (95.5)	163 (94.8)			
Total	154 (100)	172 (100)			

HRG = High Resilience Group; LRG = Low Resilience Group; Contrast = T-Student/Chi-cuadrado; * = p <.05; ** = p <.01; ns = no significant; g.l = degrees of freedom; η^2 = eta square.

Instruments

Socio-Demographic data: An ad-hoc sheet was prepared to collect socio-demographic data on each participant (Table 1).

Hope Herth Index (HHI) de Herth (1992). The adapted version has been used and translated to the Spanish population from Authors (in press). This scale consists of 12 4-point Likert type items where 1 is totally disagree, and 4 is totally agree. Items 3 and 6 must have their scores reversed. The higher the score, the more hope there is. The Spanish version measures hope through a two-dimensional structure (future and positive hope), has a high internal consistency (α = 0.97), and adequate divergent validity with hopelessness of -0.77. The maximum possible score is 48, and the minimum is 12.

General Self-Efficacy Scale-GSE (Schwarzer & Jerusalem, 1995). Translated into Spanish as Escala de Autoeficacia General by Sanjuán, Pérez García, and Bermúdez (2000), this scale measures general self-efficacy; that is, the belief that one's actions are responsible for successful outcomes and is made up of 10 items with a scale from 1 (not at all true) to 4

(completely true). No cut-off points have been established; they vary from 10–40 points and simply the higher the score, the greater the overall perceived self-efficacy. The internal consistency of the Spanish version was 0.84

The Multidimensional Scale of Perceived Social Support (MSPSS) de Zimet et al., (1988) was adapted into Spanish by Landeta and Calvete (2002) under the name of Escala Multidimensional de Apoyo Social Percibido (EMAS). It is a 12-item instrument with 7 alternative answers (where 1 is "To be totally in disagreement" and 7 is "To be totally in agreement") that collects the person's perception of their levels of social support according to three subdimensions: Family, friends, and relevant people. Having a higher score in each of the subscales indicates higher levels of perception of social support, and the sum of the three scales produces an overall score of satisfaction with the perceived social support. The original study reliability in samples of university students was 0.85 (Cronbach alpha), and in subsequent studies also with university students, McDonald's omega (1999) was 0.93 (Osman et al., 2014).

State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch, & Lushene, 1970). This inventory evaluates anxiety through two forms, one to evaluate the anxiety state and another for the anxiety trait. The Spanish adaptation was carried out by the same authors in 1982. In the present study, the state form (STAI-E) has been used. This consists of 20 items with four response options (Likert type) ranging from 0 (not at all) to 3 (very much), in which the person feels as he or she is at that moment. In another study carried out by Fonseca, Paino, Sierra, Lemos, and Muñiz (2012), with a sample of 588 young people between 17 and 33 years old, an alpha of 0.93 was obtained and, therefore, regarded as highly reliable.

Beck Depression Inventory (BDI-II) (Beck, Steer, & Brown, 1996). Translated and adapted into Spanish by Sanz et al. (2005). This inventory is used to measure depression from the age of 13. It consists of 21 items with four response options, ranging from 0 (absent or

mild) to 3 (very intense). These response options are statements about the intensity of the depressive symptom. The reliability through Cronbach's alpha of the Spanish version in people with psychiatric disorders presents an adequate internal consistency (0.89).

Procedure

First, several NGOs and Reception Centers in four southern Spanish provinces were contacted by letter. These centres are dedicated to young people at risk of exclusion, in particular young immigrants. After obtaining the relevant permits from the management of each Centre and from the Equality Department of the Government of Andalusia of the province to which they belong, the collaboration of social workers and educators from the participating Centers was requested. Subsequently, the young people who gave their prior written consent were the ones who ultimately participated in the study.

With each of the centres, we worked in the company of a social worker and/or monitors from these centres. This point is very relevant since it is not a receptive population to this type of contacts, so there was a long process of mutual adaptation in order to gain the trust of the people who were going to be evaluated. Throughout this process of mutual knowledge and participation in their activities, the tests were applied. This procedure was carried out for several weeks as not all of the young people were available at the same time, but the same protocol was always followed.

Data analysis

A quasi-experimental design has been followed, since the subjects were not randomly assigned to form both groups, and transversal as only one measurement has been made in time. For the data analysis process, it was decided to use the IBM SPSS Statistics Base statistical package (version 22.0.0). The level of significance required in all tests was $p \leq$

0.05, $p \leq 0.01$, or $p \leq 0.001$. First, descriptive analyses of the variables were carried out and, once these indices had been obtained, a comparison was made between the two groups. For these tests, both groups (high resilience and low resilience) and dependent variables were used as independent variables: hope, self-efficacy, social support, depression, and anxiety. In addition, Pearson's correlation test was performed to test the relationship between the variables: anxiety, depression, and resilience. Reliability was also checked through the internal consistency procedure of the instruments used (Cronbach alpha coefficient and McDonald's omega). Finally, a multiple regression analysis was applied to check which variables could be predictive of a greater degree of resilience or a greater degree of psychopathology (anxiety or depression).

RESULTS

The descriptive results showed important differences between both groups (high resilience and low resilience) in all psychosocial variables (Table 2). In addition, an important size of the contrast effect of the differences between both groups (0.60 to 0.94) and a strong potency (between 0.75 and 1) stands out, especially in protective factors (hope, self-efficacy, and social support). The internal consistency for all variables in these youth samples was estimated to be between high and very high (see alpha and omega).

Table 2. Descriptive analyses for both samples according to variables.

	HRG M(SD)	LRG M(SD)	*t*	*p*	η^2	Pot.	SW	α_{HRG}	α_{LRG}	ω_{HRG}	ω_{LRG}
HHI	32.1 (6.2)	19.9 (6.5)	16.72	$.12^{*}$	.83	.91	$.96^{ns}$	.92	.87	.95	.83
GSE	38.2 (3.6)	11.9 (3.2)	13.02	$.34^{**}$	.89	.96	$.39^{ns}$	82	83	90	81
MSPSS	72.4(1.7)	14.9(2.2)	14.45	$.22^{**}$	.81	.92	$.82^{ns}$	86	.88	96	91
STAI-S	11.4(1.8)	57.1(1.2)	22.67	$.75^{**}$	.60	.75	$.63^{ns}$	.76	.72	.78	.81

BDI-II	21.2(3.5)	49.1(3.8)	13.71	.47*	.87	.95	.43ns	.81	.90	.86	.91
RS-14	89.6(3.9)	18.9(3.7)	50.91	.69**	.94	1.00	.39ns	.83	.78	.86	.80

HRG = High Resilience Group; LRG = Low Resilience Group; M = Mean; SD = Standard Deviation; HHI = Hope Herth Index; GSE = General Self-Efficacy Scale; MSPSS = Multidimensional Scale of Perceived Social Support; STAI-S = State Trait Anxiety Inventory-State; BDI II = Beck Depression Inventory; RS-14 = 14-Item Resilience Scale; t = T-Student; p = significance; η2 = Eta cuadrado; Pot. = Power; SW = Shapiro Wilks Test; α = Cronbach Alpha; ω = McDonald's Omega; *Significant ($p \leq 0.05$); **Very Significant ($p \leq 0.01$); Not Significant (p = ns)

Regarding the multiple linear regression process, the results meet the basic assumptions of suitability for the beginning of this analysis. In particular, the independence of errors through the Durwin-Watson test indicates that this suitability assumption is fulfilled in the independent resilience variable (RS-14) only in model three (DW = 1.95). However, the assumption of non-multicollinearity is fulfilled for this variable in the three predictive models proposed, since its value is below 6 (Kleinbaum, Kupper, & Muller, 1988) (IVF = between 1.05 and 1.98). The multiple linear regression process (Table 3) shows that the group of socio-demographic and psychosocial variables of protection most predictive of resilience as a result in young immigrants was that corresponding to model 3, which is constituted by weight in the regression equation, would be (ordered from highest to lowest): general self-efficacy, hope (specifically the subdimension positive hope), social support (subdimension of relevant persons) and religion (believer/practitioner), and occupation (work).

Table 3. Predictive models of socio-demographic and clinical variables in young immigrants with high resilience (n = 154).

Models and variables	R^{2c}	*F*	B	SE	*t*	β	CI (95%) (β)	
							LL.	UL.
1	.56	112.14**						
Age (22-23)			.18	4.32	.16*	.51	-.12	1.32
Religion (believer/practitioner)			.26	2.67	.45*	.32	-.02	3.56
2	.61	436.10**						

Age (22-23)			.65	2.56	1.12*	3.45	-.12	4.65
Occupation (work)			.04	1.34	.12^{ns}	.53	-.02	.59
Religion (believer/practitioner)			.21	1.56	3.71*	1.57	.32	2.06
HHI			.56	2.45	4.36**	1.61	1.35	2.91
3	.92	2134.16***						
Occupation (work)			1.71	1.23	18.45***	8.78	7.98	9.12
Religion (believer/practitioner)			2.34	.56	11.22**	2.13	1.01	3.23
HHI			1.13	.71	18.91**	6.71	5.54	7.21
GSE			1.82	.47	38.19***	7.31	6.18	8.12
MSPSS			1.21	.59	18.47**	5.18	4.31	6.89

R^{2c} = corrected determination coefficient; F = contrast statistic (ANOVA); *p < 0.05 **p < 0.01; ***p < 0.001; ns = non-significant; B = non-standardized coefficient; SE = standard error; t = predictive variable contrast statistic; β = result of regression or beta equation; CI95% = confidence intervals; LL = lower limit; UL = upper limit

DISCUSSION

The growth of the migratory movement is constant in Spain. There are many nationalities and cultures of people who move to look for a better life for themselves and/or their families, and immigrants from sub-Saharan represent a large group in Spain. Given this, it is surprising not to have found research dedicated to the study of resilience and the sub-Saharan population installed in Spain (NSI, 2018), and even less so in young people. For this reason, it was considered appropriate to dedicate the present work to the study of resilience in this group. The aim of this research was to evaluate differences in risk and protection factors that produce resilient results in young sub-Saharan immigrants in Spain and to investigate which socio-demographic and psychosocial variables are predictive of a high level of resilience in this group.

Traditionally, there has been a tendency to assume that negative life circumstances prevent positive adaptation. However, people with a history of adverse situations might report better mental health and well-being outcomes than people without a history of adversity, as reflected in previous studies (Neff & Broady, 2011; Seery, 2011). Thus, mental health has been shown to benefit from resilience, with a decrease in depressive and anxiety symptoms (Restrepo et al., 2011). Some authors already reported that resilience is a favourable outcome

on mental health compared to psychopathological outcomes (symptoms of depression and anxiety), as has been observed in other immigration studies in the United Kingdom and Germany (Elgorriaga et al., 2019). The results of this study have shown that there is a significant proportion of sub-Saharan youth exposed to a migration situation who have been able to develop high resilience. This confirms previous studies that reflect that exposure to adverse or traumatic situations arising from the migration process leads to the development of psychosocial resources that could counteract the risk factors (Fletcher & Sarkar, 2013). Perhaps this is due to the fact that these young people have protective factors, such as religion and spirituality, that could play an important role in this issue, since the results show that young immigrants have a high degree of religiosity (believers and practitioners). This is in line with the results obtained in other works, such as that of Teti et al. (2012), in which religion is an important element for resilience. It should also be noted that religious practice and belief would be part of a person's cultural identity, so these young people could also be considered to have another factor considered to be protective, namely the maintenance of their cultural identity. Furthermore, the results obtained show that many of these young people live with friends and colleagues, although all of them were in association centre flats, so it could be considered that they present another protective factor (social support and good relationships between equals), as Claver (2014) points out. In this sense, we should highlight the great social work carried out by all these types of immigrant associations that helped to carry out this work.

The results of this research provide clues to the great power of resilience in people's mental health and well-being and, therefore, the need to increase protective factors and reduce risk factors in young sub-Saharan immigrants. Thus, this study notes the need to raise awareness both among professionals and society at large of the importance of providing young people at risk of social exclusion, such as immigrants, with adequate resources and

promoting the protective factors that contribute to a high level of resilience. As we have seen, providing these young people with opportunities, such as a good education and appropriate family-type social support, could be very beneficial. Perhaps, for this reason, it should be considered important to establish resilience as an aspect of working within psychological therapies in centres or associations dedicated to groups exposed to adverse traumatic situations.

There is a lot of research devoted to the study of strategies and the implementation of projects to improve the adaptation of this group. However, it should be stressed that clinical practice could contribute significantly to improving resilience and achieving a higher quality of life. In fact, no intervention programs aimed at improving the resilience of young sub-Saharan immigrants have been found. Despite this, others have been found that target young people at risk of social exclusion, aimed exclusively at promoting integration into work or school, but not resilience as a result. It is essential to increase protective factors such as hope, self-efficacy, and social support that have proven to be very predictive in psychological resilience processes. There are specific programmes that have been implemented with a similar objective. One of the culturally adapted treatments that have proven to be effective with immigrant populations is cognitive-behavioural therapy (CBT), which considers the adaptation of cognitive, affective-motivational, and environmental components. In the study conducted by Antoniades, Mazza, and Brijnath (2014), positive results were obtained for depressive symptomatology. These results are again found in other studies whose main treatment as CBT, with the exception that the immigrants were of Latin American nationality (Hovey, Hurtado & Seligman, 2014; Le, Zmuda, Perry & Muñoz, 2010). As mentioned above, although some of these programs do not specifically target sub-Saharan immigrant youth, many of their activities and strategies can be useful and enriching to clinical practice, but should focus primarily on improving the more predictive protective factors to increase

resilience as a result in specific situations, such as immigration, since we already know that resilience is a process that is modulated by the type of adverse situation experienced (Fletcher & Sarkar, 2013; Sánchez-Teruel, 2016).

This study has some limitations. For example, this group had significant difficulties in showing their feelings and talking about themselves. Also, a possible bias would be social desirability. This bias must be considered with respect to the results obtained in all the questionnaires used, especially in the socio-demographic data (e.g., psychological problems, physical problems, and stressful situations). Perhaps due to this bias, immigrant youth would have a lower level of stressful situations. Another of the important limitations of the present study is that all the participants were men, since it has not been possible to study young women. It must be taken into account that this work does not have an experimental design (in which subjects are assigned to groups randomly) but quasi-experimental (subjects are not assigned randomly when forming both groups), which allowed both groups to share homogeneous characteristics (sex, age, and the number of participants), and to control possible foreign variables in this way. The work carried out has followed a transversal design, due to the lack of time to carry out a longitudinal study, so the time factor could be an aspect to consider for future research. Therefore, perhaps if the same work were to be replicated again after a certain period of time, the results would be different for both groups. In future work, it would also be interesting to consider the time that young immigrants have been installed in the host country.

Funding

This research was not supported by any funding source.

CRediT authorship contribution statement

David Sánchez-Teruel: Conceptualization, Methodology, Formal analysis, Data curation, Writing - original draft. Writing - review. Supervision. **Maria A. Robles-Bello:** Conceptualization, Methodology, Investigation, Data curation, Writing- review & editing. Supervision. Project administration. **José A. Camacho-Conde:** Conceptualization, Methodology, Writing - review & editing.

Declaration of Competing Interest

None of the authors have any disclosures.

Acknowledgements

The authors thank all the associations involved in the procedure of this study and to all the participants.

References

Alegría, M., Álvarez, K., & DiMarzio, K. (2017). Immigration and Mental Health. *Current Epidemiology Reports, 4*(2), 145–155. https://doi.org/10.1007/s40471-017-0111-2

Antoniades, J., Mazza, D. & Brijnath, B. (2014). Efficacy of depression treatments for immigrant patients: results from a systematic review. *BMC Psychiatry*, *14*, 176. doi: 10.1186/1471-244X-14-176

Ballús, E. & Viel, S. (2009). Inmigración y Resiliencia [Immigration y Resilience]. *Española del Rorschach y Métodos proyectivos. 22,* 64-72.

Beck, A. T., Steer, R. A. & Brown, G. K. (1996). *BDI-II Manual.* San Antonio: The Psychological Corporation.

Bustamante, L., Cerqueira, R.O., Leclerc, E., & Brietzke, E. (2018). Stress, trauma, and posttraumatic stress disorder in migrants: a comprehensive review. *Brazilian Journal of Psychiatry, 40*, 220–225 doi:10.1590/1516-4446-2017-2290

Claver, E. (2014). Trayectorias de éxito en adolescentes extranjeros. Una mirada trans a través de un estudio longitudinal de caso [Trajectories of success in foreign adolescents. A trans look through a longitudinal case study]. *Espacios Transnacionales: Revista Latinoamericana-Europea de Pensamiento y Acción Social*, *1*, 62-75.

Connor, K. M. & Davidson, J. R. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and Anxiety*, *18*, 76-82. doi: 10.1002/da.10113

Elgorriaga, E., Ibabe, I., & Arnoso, A. (2019). Mental health of Spanish immigrants in Germany and the UK in comparison to non-immigrants and migration protective factors. *Psychosocial Intervention, 28*, 19-27. https://doi.org/10.5093/pi2018a16

Fletcher, D., & Sarkar, M. (2013). Psychological Resilience A Review and Critique of Definitions, Concepts, and Theory. *European Psychologist, 18*(1):12–23. doi: 10.1027/1016-9040/a000124

Fonseca, E., Paino, M., Sierra, S., Lemos, S. & Muñiz, J. (2012). Propiedades psicométricas del "Cuestionario de ansiedad estado-rasgo" (STAI) en universitarios [Psychometric properties of the "State-trait anxiety questionnaire" (STAI) in university students]. *Psicología Conductual*, *20*, 547.

Foo, S.Q., Tam, W.W., Ho, C.S., Tran, B.X., Nguyen, L.H., McIntyre, R.S., & Ho, RC (2018). Prevalence of Depression among Migrants: A Systematic Review and Meta-Analysis. *International Journal of Environmental Research and Public Health, 15*(9), 1986. doi:10.3390/ijerph15091986

Hidalgo, N., Peralta, M., Robles, H., Vilar, R. & Pérez, M. (2009). Estrés y psicopatología en mujeres inmigrantes: repercusiones sobre la calidad de vida [Stress and psychopathology in immigrant women: repercussions on quality of life]. *Psicología Conductual=Behavioral Psychology: Revista Internacional de Psicología Clínica y de la Salud*, *17*(3), 595-607.

Hashemi-Aliabadi, S., Jalali, A., Rahmati, M., Nader, S. (2020). Group reminiscence for hope and resilience in care-seekers who have attempted suicide. Annals of General Psychiatry, 19, 4. https://doi.org/10.1186/s12991-020-0257-z

Herth, K. (1992). Abbreviated instrument to measure hope: development and psychometric evaluation. Journal of Advanced Nursing, 17(10), 1251-1259. doi:10.1111/j.1365-2648.1992.tb01843.x

Hovey, J. D., Hurtado, G. & Seligman, L. D. (2014). Findings for a CBT support group for Latina migrant farmworkers in Western Colorado. *Current Psychology*, *33*, 271-281. doi: 10.1007/s12144-014-9212-y

Kleinbaum, D.G., Kupper, L.L., & Muller, K.E. (1988). *Variable Reduction and Factor Analysis. Applied Regression Analysis and Other Multivariable Methods*. Boston: PWS Kent Publishing Co.

National Statistics Institute (INE, 2018). Statistics on immigrants in Spain. Available at https://www.ine.es/

Neff, L. A., & Broady, E. F. (2011). Stress resilience in early marriage: Can practice make perfect? *Journal of Personality and Social Psychology*, *101*(05), 1050–1067. doi: 10.1037/a0023809

Korenblum, W., Barthel, A., Licino, J., Wong, H. L., Kirschbaum, C. & Bornstein, S. R. (2005). Elevated cortisol levels and increased rates of diabetes and mood symptoms in

Soviet Union-born Jewish immigrants to Germany. *Molecular Psychiatry, 10*(1), 974-975. doi: 10.1038/sj.mp.4001720

Landeta, O. & Calvete, E. (2002). Adaptación y validación de la Escala Multidimensional de Apoyo Social Percibido. *Ansiedad y Estrés,* 8(2-3): 173-182.

Le, H.-N., Zmuda, J., Perry, D. F., & Muñoz, R. F. (2010). Transforming an evidence-based intervention to prevent perinatal depression for low-income Latina immigrants. American Journal of Orthopsychiatry, 80(1), 34–45. doi: 10.1111/j.1939-0025.2010.01005.x

Logie, C. H., Lacombe-Duncan, A., Lee-Foon, N., Ryan, S., & Ramsay, H. (2016). "It's for us -newcomers, LGBTQ persons, and HIV-positive persons. You feel free to be": a qualitative study exploring social support group participation among African and Caribbean lesbian, gay, bisexual and transgender newcomers and refugees in Toronto, Canada. *BMC International Health and Human Rights, 16*(1), 18. doi: 10.1186/s12914-016-0092-0

Masten, A. S. (2014). Ordinary magic. Resilience in development. New York, NY: Guilford.

McDonald, R. P. (1999). *Test theory: A unified treatment*. Mahwah, New York: Erlbaum

Mhongera, P.B. & Lombard, A. (2020). Pathways of resilience for children facing socio-economic adversities: Experiences from Future Families' OVC programmes in South Africa. *Children and Youth Services Review*, *108*, 104657. doi: 10.1016/j.childyouth.2019.104657

Heather, M., Morton, E., Nadal, A., & Smith, K.A. (2019). Purpose and coping with adversity: A repeated measures, mixed-methods study with young adolescents. *Journal of Adolescence, 76,* 1-11. doi: 10.1016/j.adolescence.2019.07.015

Observatorio Permanente Andaluz de Migraciones-OPAM, (2018). *La población de origen magrebí en Andalucía: Una mirada hacia las mujeres (2016-2018) [The population of*

North African origin in Andalusia: A look towards women (2016-2018)]. Sevilla: Consejería de Justicia e Interior

Osman, A., Lamis, D.A., Freedenthal, S., Gutierrez, P.M. & McNaughton-Cassill, M. (2014) The Multidimensional Scale of Perceived Social Support: Analyses of Internal Reliability, Measurement Invariance and Correlates Across Gender. *Journal of Personality Assessment, 96*(1), 103-112. doi: 10.1080/00223891.2013.838170

Restrepo, C., Vinacia, S. & Margarita, J. (2011). Resiliencia y depresión: Un estudio exploratorio desde la calidad de vida en la adolescencia [Resilience and depression: An exploratory study from the quality of life in adolescence]. *Suma Psicológica*, *18*(2), 41-48. doi: 10.14349/sumapsi2011.594

Author (2014). xxxxxxxxxxx

Authors (2016). *xxxxxxxxx*

Authors (in press). xxxxxxxxxx

Sanjuán, P., Pérez García, A., & Bermúdez, J. (2000). Escala de autoeficacia general: datos psicométricos de la adaptación para población Española. [General self-efficacy scale: adaptation psychometric data for the Spanish population]. *Psicothema, 12*(2), 509-513.

Seery, M. D. (2011). Resilience: A silver lining to experiencing adverse life events. Current Directions in Psychological Science, 20, 390–394

Schwarzer, R., & Jerusalem, M. (1995). General Self-Efficacy Scale. In J. Weinman, S. Wright, & M. Johnston, Measures in health psychology: A user's portfolio. Causal and control beliefs (pp. 35-37). Windsor, UK: NFER-NELSON.

Sanz, J., García-Vera, M.P., Espinosa, R., Fortún, M., & Vázquez, C. (2005). Spanish adaptation of the Beck Depression Inventory-II (BDI-II): Psychometric features in patiens with psychological disorders. *Clínica y Salud, 16* (2). 121-142

Straiton, M. L., Ledesma, H., & Donnelly, T. T. (2017). A qualitative study of Filipina immigrants' stress, distress and coping: the impact of their multiple, transnational roles as women. BMC women's health, 17(1), 72. doi: 10.1186/s12905-017-0429-4

Spielberger, C. D., Gorsuch, R. & Lushene, R. (1970). *Manual for the State-Trait Anxiety Inventory.* Palo Alto, California: Consulting Psychologist Press.

Tarhan, S., Bacanli, H., Dombayci. M.A., & Demir, M. (2011). Quadruple thinking: hopeful thinking. *Procedia Social Behavioral Science*, 12, 568-576. https://doi.org/10.1016/j.sbspro.2011.02.069.

Teti, M., Martin, A. E., Ranade, R., Massie, J, Malebranche, D. J., Tschann, J. M. & Bowleg, L. (2012). "I'm a will continue to rise I am a move on, regardless": Exploring Resilience Amid Black Men socio structural challenges and stressors. *Qualitative Health Research, 22*(4), 524-533. doi: 10.1177/1049732311422051

Utsey, S. O., Giesbrecht, N., Hook, J. & Stanard, P. M. (2008). Cultural, sociofamilial, and psychological resources that inhibit psychological distress in African Americans exposed to stressful life events and race-related stress. *Journal of Counseling Psychology, 55*, 49. doi: 10.1037/0022-0167.55.1.49

Wagnild, G. M. (2009). *The Resilience Scale User's Guide for the US English version of the Resilience Scale and the 14-Item Resilience Scale*. Worden, Montana (USA): The Resilience Center.

Zimet, G.D., Dahlem, N.W., Zimet, S.G., & Farley, G.K. (1988). The multidimensional scale of perceived social support. *The Journal of Personality Assessment*, 52 (1): 30-41.

Declaration of interests

☒ The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

☐ The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: