Associations Among Resilience, Posttraumatic Growth, Anxiety, and Depression and Their Prediction From Stress in Newly Diagnosed People Living With HIV

Helena Garrido-Hernansaiz, MS*
Jesús Alonso-Tapia, PhD

Key words: *anxiety, depression, HIV, posttraumatic growth, resilience, stress*

Receiving an HIV diagnosis is a stressful life event with mental health consequences. People living with HIV (PLWH) report levels of anxiety and depression much higher than the general population (Chaudhury, Bakhla, & Saini, 2016), but positive mental health outcomes such as resilience and posttraumatic growth (PTG) have also been reported in this population (Murphy & Hevey, 2013). Resilience has been conceptualized in numerous ways (e.g., as a protective factor, as a process, as an outcome), but to some authors it is best defined as an outcome of positive adaptation in the face of adversity (e.g., Zautra, Hall, & Murray, 2010). It is the maintenance of a relatively stable trajectory of healthy functioning following exposure to a potential trauma (in this case, an HIV diagnosis), thus involving the return to pretrauma functioning levels (Bonanno, 2004). PTG, for its part, involves not just a return to pretrauma levels of functioning but an actual improvement (Tedeschi & Calhoun, 1996), and so it implies learning and growing after adversities.

Although it has been established that these negative and positive outcomes coexist after an adverse event (Vera Poseck, Carbelo Baquero, & Vecina Jiménez, 2006), little is understood about their relationships with one another (Scali et al., 2012). Additionally, perceived stress has been identified as an important variable that impacts mental health. It has been associated with lower levels of resilience and greater anxiety, depression, and PTG in a variety of populations (Bonanno, Galea, Bucciarelli, & Vlahov, 2007; Chaudhury et al., 2016; Helgeson, Reynolds, & Tomich, 2006; Remor, 2006; Westphal & Bonanno, 2007), although data regarding PLWH is sometimes limited or nonexistent, especially with regard to resilience outcomes and PTG.

In this brief report, we addressed these subjects by studying the relationships among anxiety, depression, resilience, and PTG in the context of HIV diagnosis, specifically in newly diagnosed Spanish-speaking PLWH from Spain and Latin America. We also looked at how peri-diagnosis levels of perceived stress might explain the development of anxiety, depression, resilience, and PTG 6 months later. Additionally, we explored possible differences in levels of anxiety, depression, resilience, and PTG by sociodemographic variables.

Methods

Approval for this study was obtained from the institutional review board at Universidad Autónoma

*Helena Garrido-Hernansaiz, MS, is a Researcher in Training, Department of Biological and Health Psychology, School of Psychology, Universidad Autónoma de Madrid, Madrid, Spain. (*Correspondence to: helenagarrido42@gmail.com). Jesús Alonso-Tapia, PhD, is a Full Professor, Department of Biological and Health Psychology, School of Psychology, Universidad Autónoma de Madrid, Madrid, Spain.*

JOURNAL OF THE ASSOCIATION OF NURSES IN AIDS CARE, Vol. ■, No. ■, ■/■ 2017, 1-6
http://dx.doi.org/10.1016/j.jana.2016.12.005

de Madrid, and longitudinal quantitative data were collected between October 2014 and November 2016. Participants were recruited either through referral by staff at a health care center that specialized in sexually transmitted infections in Madrid (Spain; $n = 92$) or through online advertisement by several local and national HIV associations and groups from Spanish-speaking countries who agreed to share information about the study ($n = 53$). Inclusion criteria were: a minimum of 18 years of age, HIV diagnosis, able to read and write in Spanish, and time after diagnosis of no more than 100 days. Agreement to participate was provided by 145 eligible PLWH, who completed the initial questionnaires. Six months later, participants were contacted and asked to complete the second set of questionnaires, and 119 did so (attrition rate = 18%).

In the first assessment (T0), participants reported their age, gender, sexual orientation, country of origin, relationship status, education level, employment status, time since diagnosis, and mode of HIV transmission. They also completed the Perceived Stress Scale Spanish adaptation (Remor, 2006), a 10-item questionnaire measuring general perceived stress. Participants recruited through the health care center completed the assessment using pen-and-paper questionnaires in a private room after a medical appointment. Participants recruited through online advertisement accessed and completed the questionnaires on an online survey platform at a time and place of their choosing.

In the second assessment (T1), participants reported if they had initiated antiretroviral therapy (ART) and completed a 4-item subscale of the Situated Subjective Resilience Questionnaire for Adults (Hernansaiz-Garrido, Rodríguez-Rey, Alonso-Tapia, Ruiz-Díaz, & Nieto-Vizcaíno, 2014), which assessed resilience in the face of stress due to health problems. Participants also completed the Spanish adaptation of the Posttraumatic Growth Inventory (Weiss & Berger, 2006), which measured PTG in three domains: philosophy of life, the self, and interpersonal relationships. In order to ensure that participants' responses referred to the experience of HIV diagnosis, they were instructed to respond to resilience and PTG measures in relation to how they had evolved psychologically after the HIV diagnosis. Lastly, they completed the Hospital Anxiety and Depression Scale (HADS) Spanish adaptation (Tejero, Guimerá, Farré, & Peri, 1986), a self-report measure comprised of 14 items with two 7-item subscales, one for anxiety (HADS-A) and one for depression (HADS-D). This assessment was completed online by all participants at a time and place of their choosing, regardless of the initial recruitment method.

Analyses of variance were conducted to test mean differences in resilience, anxiety, depression, and PTG by demographic variables. Pearson correlations were performed to test bivariate associations between participants' scores on resilience, anxiety, depression, and the three PTG dimensions. Lastly, structural equation modeling (SEM) was used to examine how perceived stress contributed to predict the four mental health outcomes. Peri-diagnosis-perceived stress (measured at T0) was included in the model as predictor, and resilience, anxiety, depression, and PTG (measured at T1) were included as criteria. This type of analysis accounts for multiple relationships between variables, for measurement error, and allows testing of directional relationships. Maximum likelihood mean and variance-adjusted estimation procedure, a robust estimator adequate for ordinal variables, was used. The comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR) were used to assess model fit, following recommended criteria (SRMR $\leq .08$; RMSEA $\leq .06$; CFI $\geq .95$; Hu & Bentler, 1999). Analyses were performed using MPlus 7 (Muthén & Muthén, Los Angeles, CA) for the SEM and SPSS 23 (IBM, Armonk, NY) for the rest.

Results

The sample ($N = 119$) was mostly composed of males (97.5%), with a mean age of 32.73 years ($SD = 8.25$), and a mean of 38.78 days since diagnosis at T0 ($SD = 20.43$). The majority of participants (93.3%) reported sexual intercourse as the mode of HIV transmission. More than half of the participants (57.1%) were from Spain; 38.7% were from Latin American countries (e.g., Venezuela, México, Argentina), and the rest were from other countries (e.g., Italy; 4.2%). A small percentage of them (3.4%) had at most a primary education, with more