Revista de Psicología y Ciencias del Comportamiento de la Unidad Académica de Ciencias Jurídicas y Sociales
Vol. 11 Núm. 1 (enero-junio 2020)

**Recibido:** 05/03/2019 **Aceptado:** 20/05/2020 **Publicado:** 17/06/2020 **DOI:** 10.29059/rpcc.20200617-108

Investigación empírica y análisis teórico

# Psychological well-being and anxiety among relatives of Mexican cancer patients: Two models

# El bienestar psicológico y la ansiedad entre parientes de pacientes mexicanos con cáncer: dos modelos

García Cadena Cirilo Humberto [1*]; Díaz Héctor[2]; Téllez López Arnoldo[1]; Fuensanta López Rosales[1]; Castro Saucedo Laura[3] y García García Enrique[3]

**Resumen:**

El modelo psicopatológico de salud mental enfatiza dimensiones como la depresión y la ansiedad. Sin embargo, el modelo dual incluye rasgos positivos como el optimismo y la autoestima. El estudio actual comparó ambos modelos para descubrir cuál predice mejor el bienestar psicológico y la ansiedad. El procedimiento utilizado en este estudio incluyó el cálculo de un índice de salud mental que combinaba optimismo, autoestima, depresión y puntajes de estrés percibido. La muestra de conveniencia consistió en 350 familiares de pacientes con cáncer. Su edad media fue M = 39.87 años, SD = 14.87. Se utilizó un modelo de ecuación estructural para medir los efectos de la salud mental sobre el bienestar psicológico y la ansiedad. Los hallazgos revelan que ambos modelos producen efectos de tamaño similares (> 0.26) de las variaciones explicadas. Sin embargo, el modelo dual tiene una mayor capacidad para predecir el bienestar psicológico (.65 versus .44) y la ansiedad (.46 versus .38). Finalmente, el artículo analiza las implicaciones del modelo dual para el diagnóstico, la interpretación y la intervención.

**Palabras Clave:** *modelo dual, salud mental, modelos psicopatológicos, bienestar, ansiedad.*

**Abstract**

The psychopathological model of mental health emphasizes dimensions such as depression and anxiety. The dual model however includes positive traits such as optimism and self-esteem. The current study compared both models to show which one better predicts psychological wellbeing as well as anxiety. The procedure utilized in this study included calculating a mental health index that combined optimism, self-esteem, depression and perceived stress scores. The sample for convenience consisted of 350 relatives of cancer patients. Their mean age was M = 39.87 years, SD = 14.87. Structural equation modeling was used to measure the effects of mental health over psychological well -being and anxiety. Findings reveal that both models produce similar size effects (> 0.26) of the explained variances. The dual model however has a greater capacity to predict psychological well-being (.65 versus .44) and anxiety (.46 versus .38). Finally, the article discusses implications of the dual model for diagnosis, interpretation and intervention.

**Keywords:** : *dual model, mental health, psychopathological models, well-being, anxiety.*

[1] Universidad Autónoma de Nuevo León
[2] Western Michigan University
[3] Universidad Autónoma de Coahuila

*Correspondencia: ciriloenator@gmail.com

According to Davidson, Campbell, Shannon and Mulholland (2015), it can be considered that exist three types of theoretical models on mental health: 1) the bio-medical approach, 2) the psychological approach and 3) the social approach. The dominant viewpoint on mental health is the bio-medical approach and although it implies a significant contribution, it lacks a comprehensive explanation over the complex phenomenon of mental health; also, we can say that this approach has unsolved epistemological problems about the relationship between the body and a supposed mind. The bio-medical approach on mental health emphasizes namely three main processes: 1) the physiological, 2) the biochemical and 3) the genetic. Regarding the psychological approach on mental health, it outlines processes of the relationship between the individual and its environment taking into account a supposed unconscious mind (psychoanalytic perspective), or a mechanical relationship between the organism with its environment (behaviorism). Besides there are other psychological perspectives like the humanistic, cognitive behavioral and the systemic points of view. In the social approach (as stated by Davidson et al, 2015), there are three main varieties: the social causation, the societal, and the social constructionism. The social causation posits that there are inescapable causal links between the social problems and the mental health disturbances. The societal variety emphasizes the responses of the society to the mental health problems, outlying important aspects of stigma and discrimination. Finally, social constructionism defies the objective nature of mental health, emphasizing on the different intelligibility cores (Gergen, 1994) through mental health is perceived by several social groups implied with it. It can be said the authors of this study are located within a psychological approach in which mental health is defined by a dual model that proposes that the assessment of mental health must take into account positive traits such as self-esteem and optimism and not only the absence of psychopathological traits such as depression and stress (Headey, 2010; Keyes, Dhingra, & Simoes , 2010; Lyons, Huebner, Hills, & Shinkareva, 2012). The dual model is adopted because it is holistic and more comprehensive due that includes not only pain and suffering features, but as well as joy and happiness.

Previous mental health studies in Mexico have only partially described the mental health of targeted populations given that studies have mostly focused on the urban population of Monterrey's metropolitan area (Medina et al, 2003; Medina et al, 2007), and just a few in rural population of Jalisco, Mexico (de Snyder, Diaz-Perez, & Ojeda, 2000). Furthermore, these studies have focused on psychopathology or the absence of it without taking psychological strengths into account. By contrast, the current study included psychopathological as well as positive traits in its effort to more fully and thoroughly describe the mental health of cancer patient relatives. The discussion of these two models has been chosen considering their characteristics determined not only by their antagonistic and historical origins, but also from the paradigms that sustain them.

It is very important to know what psychopathological traits and psychological strengths are conceptually and empirically associated within a dual mental health model as we attempt to diagnose particular population subgroups such as relatives of cancer patients. Psychopathological traits may include depression and perceived stress while psychological strengths may include self-esteem and optimism. The population mental health profile these factors may produce could facilitate

the evaluation of government mental health policies and programs as well as the development of data-based strategies or interventions.

Few studies have focused on these two mental health models particularly in developing countries such as Mexico. For this reason, it is necessary to conduct more research that can provide more relevant, pertinent, valid, reliable and methodologically sound information (McGuigan, 1996). Similarly, it is very important to know what mental health model better predicts and describes psychological well-being and anxiety. According to Wang and Zhang (2012) psychological well-being is a consequence or result of mental health. For this reason, research questions for this study include: 1) What mental health model better predicts psychological well-being and anxiety; the one that is defined and measured in traditional psychopathological terms or the one that is conceptualized and operationalized through the dual mental health model? ; 2) Are there differences in the percentage of families of cancer patients considered as having "complete mental health", "partial mental health", "partial mental illness", and "complete mental illness" as defined by the psychopathological perspective and the dual mental health model? This classification is based on the mental health dual model assumptions (Antaramian, Huebner, Hills, & Valois, 2010; Wang, Zhang, & Wang, 2011).

Based on these two research questions the objectives of this study are: 1) Determine what mental health model better predicts psychological well-being and anxiety, and 2) Discover if there are differences in the percentage of families of cancer patients considered as having "complete mental health", "partial mental health", "partial mental illness", and "complete mental illness" as defined by the psychopathological perspective and the dual mental health model.

Many families are being afflicted by the traumatic experience of having relatives with chronic illnesses such as cancer. According to the International Agency for Research on Cancer of the World Health Organization (Ferlay et al., 2018), the prevalence of cancer in México in 5 years was 471 497, with 190 667 new cases and there were 83 476 deaths in the year 2018.

The cancer patients suffer a lot distress because of the disease itself and the side effects of its medical treatment. The National Comprehensive Cancer Network (NCCN, 2017, p.8) defines cancer-related distress as "An unpleasant emotional experience of a psychological, social, and/or spiritual nature that may interfere with the ability to cope effectively with cancer, its physical symptoms, and its treatment". However, the cancer also affects the quality of life of family caregivers in many ways, but takes its greatest toll on their psychological well-being. There is a significant, reciprocal relationship between patient and caregiver emotional distress (Northouse, Katapodi, Schafenacker, & Weiss, 2012).

To our knowledge no research studies similar to this have been conducted in Latin America. This study promises potential benefits at multiple levels. For instance, psychologists working in hospitals and other medical facilities as well as other psychologists will be able to develop training and pertinent interventions to help reduce the psychopathology of relatives of cancer patients. This would improve their quality of life. At the same time, government officials at the city, state and national levels may use the findings of this study to justify health policies. Finally, it is expected that the findings of this study will contribute to theory building in the social and behavioral sciences.

## Method

### Research Design

This study relied on an *ex post facto*, cross sectional survey design.

### Participants

This study relied on a sample of convenience of 350 relatives of cancer patients. The majority of them were residents of the metropolitan area of Monterrey, Nuevo León (82.10 %), Tamaulipas (12.10 %), Coahuila (4.50 %), Veracruz (.60 %), Tabasco (.60 %), and Durango (.10 %); 250 (71.4%) were female and 100 (28.6%) were male. Ages ranged from 15 to 79 years ($M$ = 39.87, $SD$ = 14.87).

### Instruments

*Beck, Steer, & Brown (1996) and Beck and Steer (1990) Inventories*. These scales were used to measure depression and anxiety, respectively. The first scale is composed by 21 items which intend to measure probable severe depression in adults and adolescents. Each item has five different answer options (0 -4), when higher the number the greater severity of depression. Beck et al., (1996) report .91 Cronbach's alpha with psychiatric patients.

*Cohen, Kamarck, & Mermelstein (1983).* This test is used to measure perceived stress. This test has an internal consistency Cronbach index ranging from .84 to .86. Furthermore, the correlations found between stress and other similar symptoms ranged from .52 to .76.

*Rosenberg Self-Esteem Scale (RSES) (1989).* A 10-item scale to measure how much the individual values his/herself. This scale has a 4-point Likert format stretching from strongly agree (4) to strongly disagree (1). In a Mexican sample extracted from the open population it was obtained an alpha of .85 (Garcia Cadena, Daniel Gonzalez, & Ovalle de la O, 2019).

*LOT-R (Scheier, Carver, & Bridges, 1994) scale and the Interactive Optimism Scale-Garcia (IOS-G) (García Cadena, Téllez López, Ramírez Aguillón, Ramírez Hernández, & Perez Cota, 2016).* This is a hybrid optimism scale, which resulted from merging the LOT-R and the IOS-G. LOT-R has alphas ranging from .78 to .83 (Carver, & Scheier, 2002), meanwhile IOS-G has a Cronbach alpha internal consistency index = .85. This hybrid optimism scale has eight items, a 4-point Likert format scoping from 4 = Yes, 3 = Maybe yes, 2 = Maybe no, to 1 = No.

*Psychological well-being (Treviño, & García, 2012).* This scale was used to measure one of the dependent variables in this study. It was measured with half of the 20 items that includes the original scale (Cronbach alpha internal consistency index = .87). Evidence favors to use an instrument that includes a "well-being subjective" threefold model (Diener, 1984) and the "psychological well-being" (Ryff, 1989) because there are many studies that question the discriminant validity of both constructs given the high level of correlation of the two from .72 to .96 (Disabato, Goodman, Kashdan & Jarden, 2016).

### Procedure

Psychology students on their 10th semester at the Autonomous University of Nuevo León (Universidad Autónoma de Nuevo León), were taught to do data collection by a psychologist with experience working with cancer patients and their families. The questionnaire and the scales were administered by psychology students to relatives of cancer patients attending to various hospitals in the Metropolitan Area of Monterrey, Nuevo Leon, Mexico.

The scores of the psychopathological and the positive scales were averaged. Consistent with the dual mental health model, the

negative index was deducted from the positive index with the assumption that this would reveal the level of mental health or mental illness of each research participant. This is a relatively new logical proposal. We proceeded to subtract the negative index from the positive index based on two analog assumptions: the economic and the biological. If someone has a dollar but owes 50 cents, then his/her real capital is 50 cents. That is his/her net amount. Similarly, if I have four parotid glands but only two are functioning then according to my biological economy, I only have two glands. Thus, it is feasible for a psychopathological burden to inhibit the optimal psychological functioning that could result from psychological strengths. Because of this, we need to discount negative psychological traits as we attempt to estimate a person's level of mental health.

The range of scores was divided into four equivalent subranges in an effort to classify subjects into four categories. 1) Complete mental health, 2) Incomplete mental health. 3) Incomplete mental illness and 4) Complete mental illness (Antaramian, Huebner, Hills, & Valois, 2010; Suldo, & Shaffer, 2008; Wang, & Zhang, 2012; Wang, Zhang, & Wang, 2011).

The SPSS (version 24) software was used to calculate the Goodness of Fit of the measurement models, and the AMOS (version 24) to falsify (Popper, 1989) the structural model.

## Results

The goodness of fit for the dual mental health model was calculated and found to be adequte. The chi-square value ($\chi^2$/df) should not surpass a maximum of 3, being a good fit of the model. Comparative Fit Index (CFI), value > .90, as well as the Root Mean Square Error of Approximation (RMSEA) < .08, both show a goodness of fit from good to adequate between the theoretical model and the data (Hu, & Bentler, 1999). $X^2$/df = 2.49; CFI = .90; RMSEA = .06, with a confidence interval of 90% [.057, .074]. Similarly, the mental health model based on psychopathology generated an adequate goodness of fit ($X^2$/df = 2.94; CFI = .90; RMSEA = .07, with a confidence interval of 90% [.063, .086].

The findings show strong negative correlation between depression and psychological well-being ($\rho$ = -.581, p = .01). Psychological well-being and anxiety were also negatively correlated even though the correlation was not as strong ($\rho$ = -.437, p = .01). In contrast, depression and anxiety showed a strong and significant positive correlation ($\rho$ = .599, p = .01). A high negative correlation was found between the psychopathological mental health model (also known as mental illness model) and the dual model of mental health ($\rho$ = -.943, p =.01).

Table I shows the frequencies and percentages of participants in the four categories of mental health/illness.

Figure 1 shows the model of psychological well-being and anxiety based on the psychopathological approach to mental health, calculated by the maximum likelihood method. The psychopathological model included an average of the two independent variables, depression and perceived stress, meanwhile psychological well-being and anxiety were the dependent variables. Likewise, as shown in Figure 1 the percentages of explained variance of the psychological well-being ($R^2$ = 0.44) and anxiety ($R^2$ = 0.38) which according to Cohen (1988) have a large effect size ($\geq$ 0.26 is large effect size).

Table I.
*Participants´ mental health/mental illness according to the two models*

| | Dual Model | Psychopathological Model | Diagnostic |
|---|---|---|---|
| | Percentages | (Frequencies) | |
| 1-24 | 16.57 (58) | 16.05 (56) | Complete Mental Illness |
| 25-49 | 26.57 (93) | 58.16 (203) | Incomplete Mental |
| 50-74 | 41.14 (144) | 22.64 (79) | Incomplete Mental |
| 75-100 | 15.72 (55) | 3.15 (11) | Complete Mental Health |
| Totales | 100.00 (350) | 100.00 (349) | |

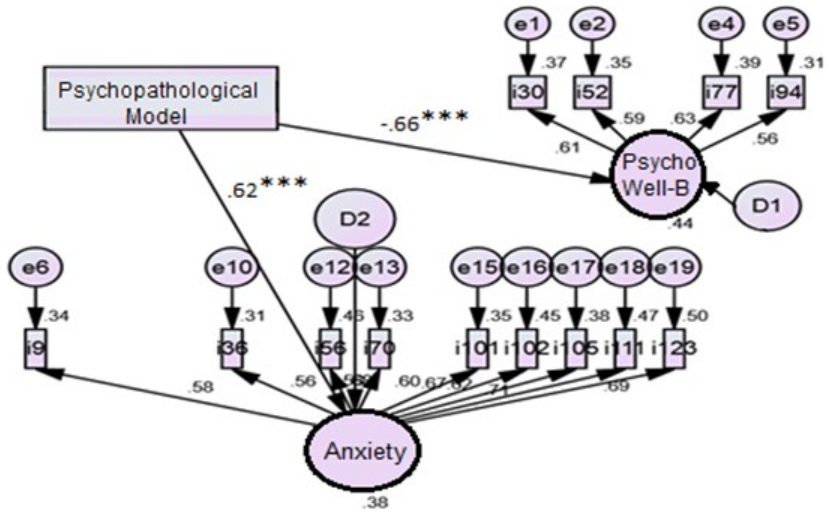


*Figure 1.* Standardized model of psychological well-being and anxiety based on the psychopathological approach to mental health, calculated by maximum likelihood method

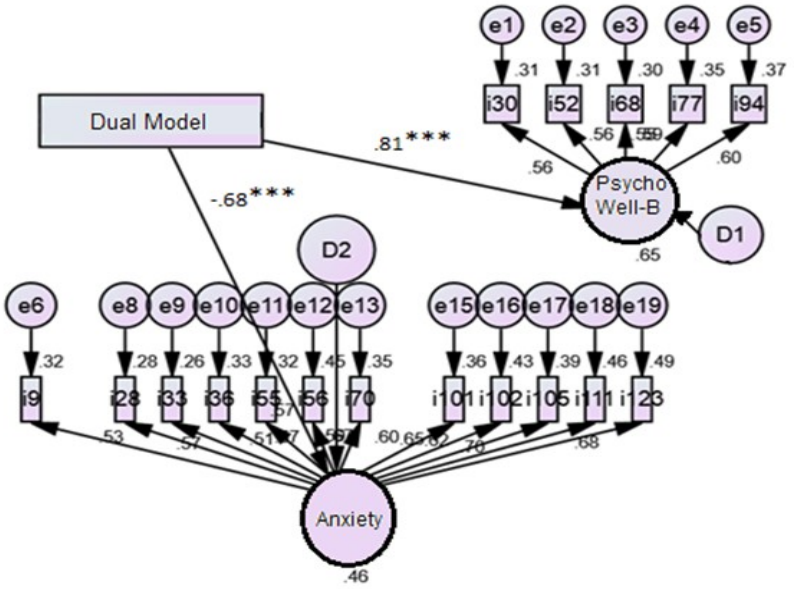


*Figure 2.* Standardized model of psychological well-being and anxiety, predicted by dual mental health approach calculated by the maximum likelihood method.

Finally Figure 2 shows the standardized model of psychological well-being and anxiety, predicted by the dual mental health approach also calculated by the maximum likelihood method. The dual model is represented by an average score derived from the fusion of two measured independent variables self-esteem and optimism, meanwhile dependent variables were psychological well-being and anxiety. By the same token, Figure 2 exhibits the explained variance percentages of the anxiety ($R^2$ = 0.46) and psychological well-being ($R^2$ = 0.65) which are considered as having large effect size (≥ 0.26 is large effect size) according to Cohen (1988).

.

## Discussion

This study has attempted to develop a psychopathology index averaging measures of self-perceived stress and depression but excluding anxiety. This has been done in an effort to overcome Doll's criticism (2008) related to the inadequacy of merging these three disorders in one index as done by Suldo and Shaffer (2008). The findings of this study support the thesis tentatively proposed by Doll (2008) based on the findings of Chorpita and Southam-Gerow (2006) about the strong negative correlation between depression and psychological well-being. Psychological well-being and anxiety were also negatively correlated even though the correlation was not as strong. In contrast, depression and anxiety showed a strong and significant positive correlation.

The dual mental health model better predicts psychological well-being (65%). This is 21 percentage points higher than the predictive power of the psychopathological mental health model (44%). At the same time, there is no significant difference in the variance of anxiety accounted for by both models (46% versus 38%) (See Figures 1 and 2).

The significance of this finding for intervention is that if we want to improve psychological well-being, we should attempt to reduce depression and stress while we work to increase optimism and self-esteem. The available literature suggests that psychological well-being is positively associated with various dimensions of psychological, physical, educational, and productive functioning (DeNeve, Diener, Tay, & Xuereb, 2013). A bi-dimensional therapeutic strategy stemming from the dual mental health model would produce better outcomes than a strategy stemming from only the psychopathological mental health model. There is evidence however suggesting that self-esteem is a psychological characteristic just like personality and intelligence that remains constant throughout the life span (Trzesniewski, Donnellan, & Robins, 2003). Further evidence in support of the proposition that mental health and mental illness are two related but different phenomena is the high negative correlation that was found between them. This has been proposed and empirically supported by other authors (Keyes, 2005; Westerhof, & Keyes, 2010).

The psychopathological model identified twice as many subjects as having incomplete mental illness (58.16% versus 26.57%) while the dual model identified almost twice as many subjects as having incomplete mental health (41.14% versus 22.64%). Finally, the dual model identified five times more cases in complete mental health category (15.72%) than psychopathological model (3.15%).

The power of the dual model and the psychopathological models to predict and explain psychological well-being is described in studies linking self-esteem (Lucas, Diener, & Suh, 1996) and optimism (Carver, & Scheier, 2002) to psychological well-being. The causal relationship that views psychological well-being as a dependent variable is supported by Von Eye and Wiedermann suggestions (2014). The effect size that was found suggests that to propose the opposite would be illogical and not probable. The large effect size also makes it improbable that changes in the dependent variable are due to extraneous or intervening variables (Cox, & Wermuth, 2001; Lynd, 2007).

Study findings are explained in part by the fact that the dual mental health index was created by the mean scores of self-esteem and optimism. The reported association between self-esteem and psychological well-being is surprising in the collectivistic Mexican society. Diener and Diener (1995) suggest that such relationship is more likely to be found in individualistic societies such as that of the United States of America. We recommend conducting research to find out if the reported predictive power would be maintained by a model combining other positive psychological dimensions such as unconditional self-acceptance, generosity, gratitude, hope and forgiveness.

## References

Antaramian, S.P., Huebner, E.S., Hills, K.J., & Valois, R.F. (2010). A dual-factor model of mental health: Toward a more comprehensive under standing of youth functioning. *American Jour nal of Orthopsychiatry, 80*(4), 462-472. doi:10.1111/j.1939-0025.2010.01049.x.

Beck, A.T., Steer, R.A., & Brown, G.K. (1996). *Manu al for the BeckDepression Inventory-II.* San Antonio, X: Psychological Corporation.

Beck, A.T., & Steer, R.A. (1990). *Manual for the Beck Anxiety Inventory*. San Antonio, TX: Psy cho logical Corporation.

Carver, C.S., & Scheier, M.F. (2002). Optimism. In C.R. Snyder, & S. Lopez (Eds.), *Handbook of Positive Psychology (pp. 231-243).* Oxford, UK: Oxford University Press.

Chorpita, B.F., & Southam, M.A. (2006). Fears and anxieties. In E.J. Mash, & R.A. Barkley (Eds.), *Treatment of childhood disorders (pp. 271-335).* New York: Guilford Press.

Cohen, J. (1988). *Statistical power analysis for the be haveioral sciences (2nd ed.*). Hillsdale, NJ: Law rence Earlbaum Associates.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A

global measure of perceived stress. *Journal of Health and Social Behavior, 24*(4), 385-396. doi: 10.2307/2136404

Cox, D.R., & Wermuth, N. (2001). Some statistical as pects of causality. *European Sociological Re view, 17*(1), 65-74. doi: 10.1093/esr/17.1.65.

Davidson, G., Campbell, J., Shannon, C., & Mulholl and, C. (2015). *Models of Mental Health.* Lon don: Red Globe Press.

DeNeve, J.E., Diener, E., Tay, L., & Xuereb, C. (2013). The objective benefits of subjective well-being. In J. F. Helliwell, R. Layard, & J. Sachs (Eds.), *World happiness report 2013. Volume 2. (pp. 54-79)*. New York: UN Sustainable Network Devel opment Solutions Network.

de Snyder, V. N. S., Diaz-Perez, M. D. J., & Ojeda, V. D. (2000). The prevalence of nervios and associ ated symptomatology among inhabitants of Mexican rural communities. *Culture, Medicine, and Psychiatry: An International Journal of Cross-Cultural Health Research, 24*(4), 453–470. doi:10.1023/A:1005655331794

Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*(3), 542-575. doi:10.1037/0033-2 909.95.3.542

Diener, E., & Diener, M. (1995). Cross-cultural corr lates of life satisfaction and self-esteem. *Journal of Personality and Social Psychology, 68*(4), 653 - 663. doi: 10.1037/0022-3514.68.4.653

Disabato, D.J., Goodman, F.R., Kashdan, T.B., Short, J.L., & Jarden, A. (2016). Different Types of Well-Being? A Cross-Cultural Examination of Hedonic and Eudaimonic Well-Being. *Psy chological Assessment, 28*(5), 471-482. doi: 10.1037/pas0000209

Doll, B. (2008). Commentary: The dual-factor model of mental health in youth. *School Psychology Re view, 37*(1), 69-73.

Ferlay, J., Ervik, M., Lam, F., Colombet, M., Mery, L., Piñeros, M., Znaor, A., Soerjomataram, I., & Bray, F. (2018). *Global Cancer Observatory: Cancer Today*. Lyon, France: International Agency for Research on Cancer. Available from: https://gco.iarc.fr/today, accessed [03/Jan/2020].

García, C.H., Téllez, A., Ramírez, G., Ramírez, E., & Pérez, E.J. (2016). Toward a global conceptual ization and measurement in positive psychology. In R. Bowers (Ed.), *Psychological well-being: Cultural influences, measurement strategies and health implications (pp. 21-42).* New York: Nova Science Publishers, Inc.

Garcia-Cadena, C. H., Daniel-González, L., & Ovalle-de la O, A. (2019). A New Brief Scale to Meas ure Optimism. *Psychological Reports,* October 25. Advance online publication. doi:10.1177/0033294119884059

Gergen, K. J. (1994). *Realities and Relationships: Soundings in Social Constructionism.* Cam bridge: Harvard University Press.

Headey, B. (2010). The set point theory of well-being has serious flaws: On the eve of a scientific revo lution? *Social Indicators Research*, *97*(1), 7-21. doi: 10.1007/s11205-009-9559-x

Hu, L. & Bentler, P. (1999). Cutoff criteria for fit index es in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equa tion Modeling: A multidisciplinary jour nal, 6 (1), 1-55. doi: 10.1080/10705519909540118

Keyes, C.L.M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology, 73*(3), 539-548. doi:10.1037/0022-006X.73.3.539

Keyes, C.L.M., Dhingra, S.S., & Simoes, E.J. (2010). Change in level of positive mental health as a predictor of future risk of mental illness. *Ameri can Journal of Public Health*, *100*(12), 2366-2371. doi:10.2105/AJPH.2010.192245

Lucas, R.E., Diener, E., & Suh, E. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psy chology, 71*(3), 616-628. doi: 10.1037/0022-3514.71.3.616

Lynd-Stevenson, R.M. (2007). Concerns regarding the traditional paradigm for causal research: The unified paradigm and causal research in scientific psychology. *Review of General Psychology, 11* (3), 286-304. doi: 10.1037/1089-2680.11.3.286

Lyons, M.D., Scott, E., Hills, K.J., & Shinkareva, S.V. (2012). The longitudinal stability and dynamics of group membership in the dual-factor model of mental health: Psychosocial predictors of mental health. *Canadian Journal of School Psychology*, *27*(4), 337-355. Advance online publication. doi:10.1177/0829573512458505

McGuigan, F.C. (1996). *Experimental psychology methods of research*. Upper Saddle River, NJ: Prentice Hall.

Medina, M.E., Borges, G., Benjet, C., Lara, C., & Ber glund, P. (2007). Psychiatric disorders in Mexi co: Lifetime prevalence in a nationally repre sentative sample.*The British Journal of Psychia try, 190*(6), 521-528. doi:10.1192/ bjp.bp.106.025841

Medina, M.E., Borges, G., Lara, C., Benjet, C., Blanco, J., Fleiz, C., Villatoro Velázquez, J., Rojas, Guiot, E., Zambrano, J., Casanova, L., & Agui lar, S. (2003). Prevalencia de trastornos mentales

y uso de servicios: resultados de la Encuesta Na cional de Epidemiología Psiquiátrica en México. *Salud Mental (Mental Health)*, *26*(4), 1-16.

National. Comprehensive Cancer Network® (NCCN®). Distress, Version 1 (2017). https:// www.nccn.org/patients/guidelines/content/PDF/ distress-patient.pdf

Northouse, L. L., Katapodi, M. C., Schafenacker, A. M., & Weiss, D. (2012). The impact of caregiving on the psychological well-being of family caregiv ers and cancer patients. *Seminars in Oncology Nursing, 28*(4), 236-245. doi: 10.1016/ j.soncn.2012.09.006.

Popper, K. (1989). Zwei Bedeutungen von Falsi fizierbarkeit [Two meanings of falsifiability]. In H. Seiffert, & G. Radnitzky (Eds.), *Handlexikon der Wissenschaftstheorie [Dictionary of episte mology] (in German) (1992 ed.).* Munich: Deutscher Taschenbuch Verlag.

Rosenberg, M. (1989). *Society and the adolescent self-image*. Middeltown, CT: Wesleyan University Press.

Ryff, C.D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology,* 57, 1069-1081. doi:10.1037/0022-3514.57.6.1069

Scheier, M.F., Carver, C.S., & Bridges, M.W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A re -evaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, *67*(6), 1063-1078. doi: 10.1037/0022-3514.67.6.1063

Suldo, S.M., & Shaffer, E.J. (2008). Looking be yond psychopathology: The dual-factor model of mental health in youth. *School Psychology Re view,* 37, 52-68.

Treviño, F., & García, C. H. (2012). El efecto de la resis tencia psicológica y el apoyo social sobre el bie nestar subjetivo de empleados y desempleados. *Revista Interamericana de Psicología Ocupacio nal (Interamerican Journal of Occupational Psychology)*, *31*(1), 5-11.

Trzesniewski, K.H., Donnellan, M.B., & Robins, R.W. (2003). Stability of self-esteem across the life span. *Journal of Personality and Social Psycholo gy,84*(1), 205-220. doi: 10.1037/0022-3514.84.1.20530.

Von Eye, A., & Wiedermann, W. (2014). On direction of dependence in latent variable contexts. *Educa tional and Psychological Measurement, 74*(1), 5-30. doi: 10.1177/0013164413505863

Wang, X., & Zhang, D. (2012). The criticism and amendment for the dual-factor Model of mental health: From Chinese psychological suzhi re search perspectives. *International Journal of Clinical Medicine, 3,* 319-327. doi: 10.4236/ijcm.35063

Wang, X., Zhang, D., & Wang, J. (2011). Dual-factor model of mental health: Surpass the traditional mental health model. *Psychology*, *2*(8), 767-772. doi:10.4236/psych.2011.28117

Westerhof, G.J., & Keyes, C.L.M. (2010). Mental ill ness and mental health: The two continua model across the lifespan. *Journal of Adult Develop ment*, 17, 110-119. doi: 10.1007/s10804-009-9082-y