

# Gerotranscendence and Satisfaction with Life

Contributions of the Centrality of Events and Religiosity.

Gerotranscendencia y Satisfacci3n con la vida: Contribuciones de la Centralidad de los  
Eventos y Religiosidad.

Gerotranscend3ncia e Satisfai33o com a vida: Contribui33es da Centralidade do Evento e  
da Religiosidade.



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## Resumen.

Tornstam identificó un potencial proceso de maduración durante la vejez que conduce a una nueva comprensión y visión cósmica de la vida, al que llamó gerotranscendencia. Luego de su formulación, la gerotranscendencia se mostró vinculada al mantenimiento de los niveles de bienestar en las personas mayores, incluso cuando sus condiciones de salud empeoraban. A pesar del considerable interés que suscitó la propuesta, también ha motivado numerosas críticas. Las críticas se centran en la restricción de la gerotranscendencia a una etapa específica de la vida, en su pretensión de universalidad y en su nivel individual de análisis. Para explorar empíricamente esta propuesta y sus críticas, se administró una batería que evaluó la edad, trascendencia espiritual, satisfacción con la vida, centralidad de los eventos y religiosidad. Se estimaron correlaciones, regresiones lineales y análisis de trayectoria a partir de una muestra incidental de 370 adultos argentinos con edades entre 18 y 85 años (M=49,14, DE=17,19). Los resultados indican que la edad explica parcialmente la trascendencia espiritual, que a su vez explica parcialmente la satisfacción con la vida ( $X^2(6) = 23.185$ ; SRMR=.06; GFI=.98). Sin embargo, la relación entre edad y trascendencia espiritual no resulta exclusiva de la vejez. Por otro lado, al explorar variables latentes a la edad cronológica, la centralidad de los eventos explica parcialmente tanto la varianza de la trascendencia espiritual como de la satisfacción con la vida ( $\beta = .10$  y  $\beta = .17$ ,  $p < .05$ ). Mientras que, la religiosidad en su aporte sociocomunitario queda excluida del modelo explicativo de la gerotranscendencia. En conclusión, a medida que se envejece y experimenta eventos traumáticos que se vuelven centrales en la autobiografía, existe una inclinación creciente hacia la trascendencia espiritual que contribuye a la satisfacción con la vida. Futuros estudios deberán profundizar en otras posibles variables latentes para la edad cronológica y las condiciones sociocomunitarias que podrían contribuir a comprender el vínculo entre el envejecimiento, la trascendencia espiritual y el bienestar.

## Abstract.

Tornstam identified a potential process of maturation during old age that leads to a new understanding and cosmic vision of life, which called gerotranscendence. Gerotranscendence shown linked to the maintenance of well-being levels in elderly, even when health conditions worsen. Despite the considerable interest generated by his contributions, has also prompted numerous criticisms. Critics focus on the restriction of gerotranscendence to a specific stage of life, its claim of universality, and its individual level of analysis. To empirically explore this proposal and critics, a battery evaluating age, spiritual transcendence, satisfaction with life, centrality of events, and religiosity was administered. Correlation, linear regression, and path analysis were conducted using an incidental sample of 370 Argentine adults with ages between 18 and 85 (M=49.14, SD=17.19). The results indicate that age partially explains spiritual transcendence, which in turn partially explains satisfaction with life ( $X^2(6) = 23.185$ ; SRMR=.06; GFI=.98). However, the relationship between age and spiritual transcendence is not exclusive to old age. On the other hand, in exploring latent variables to chronological age, centrality of events partially explains both the variance in spiritual transcendence and satisfaction with life ( $\beta = .10$  and  $\beta = .17$ ,  $p < .05$ ). Meanwhile, religiosity in its socio-community contribution is excluded from the explanatory model of gerotranscendence. In conclusion, as we aged and experience traumatic events that become central to our biography, there is a growing inclination toward transcendence that contributes to satisfaction with life. Future studies should delve into other possible latent variables to chronological age and socio-community grants that could make contributions to understanding the link between aging, spiritual transcendence, and well-being.

## Resumo.

Tornstam identificou um processo potencial de maturação durante a velhice que leva a uma nova compreensão e visão cósmica da vida, que ele chamou de gerotranscendência. Foi demonstrado que a gerotranscendência está ligada à manutenção dos níveis de bem-estar nas pessoas idosas, mesmo quando as condições de saúde pioraram. Apesar do considerável interesse que suas contribuições despertaram, ele também atraiu muitas críticas. A crítica centra-se na restrição da gerotranscendência a uma fase específica da vida, na sua pretensão de universalidade e no seu nível individual de análise. Para explorar empíricamente essa proposta e suas críticas, foi administrada uma bateria que avaliou idade, transcendência espiritual, satisfação com a vida, centralidade dos acontecimentos e religiosidade. Correlações, regressão linear e análise de trilha foram realizadas utilizando uma amostra incidental de 370 adultos argentinos com idade entre 18 e 85 anos (M=49,14, DP=17,19). Os resultados indicam que a idade explica parcialmente a transcendência espiritual, que por sua vez explica parcialmente a satisfação com a vida ( $X^2(6) = 23,185$ ; SRMR=0,06; GFI=0,98). Contudo, a relação entre idade e transcendência espiritual não é exclusiva da velhice. Por outro lado, ao explorar variáveis latentes na idade cronológica, a centralidade dos acontecimentos explica parcialmente tanto a variância da transcendência espiritual como a satisfação com a vida ( $\beta = 0,10$  e  $\beta = 0,17$ ,  $p < 0,05$ ). Entretanto, a religiosidade no seu contributo sociocomunitário fica excluída do modelo explicativo da gerotranscendência. Concluindo, à medida que envelhecemos e vivenciamos eventos traumáticos que se tornam centrais em nossa biografia, há uma inclinação crescente para a transcendência espiritual que contribui para a satisfação com a vida. Estudos futuros deverão aprofundar outras possíveis variáveis latentes na idade cronológica e nas condições sociocomunitárias que possam contribuir para a compreensão da ligação entre envelhecimento, transcendência espiritual e bem-estar.

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# Gerotranscendence and Satisfaction with Life

## Contributions of the Centrality of Events and Religiosity

**Gerotranscendencia y Satisfacción con la vida: Contribuciones de la Centralidad de los Eventos y Religiosidad.**

**Gerotranscendência e Satisfação com a vida: Contribuições da Centralidade do Evento e da Religiosidade.**

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## Introduction

The idea that spirituality or spiritual transcendence can play a notable role in satisfaction with life during aging has sparked renewed interest (Garssen et al., 2021; Lima et al., 2020; Yamada et al., 2020). A notable approach in line hail from developmental theories, specifically from Lars Tornstam's (1943/2016) proposal of gerotranscendence. Like other theories of positive aging, it stems from the finding that levels of satisfaction with life remain constant in elderly age even as physical health declines in a difficult or impossible-to-avoid manner (Bauer et al., 2017; Cowlshaw et al., 2013; Krueger & Stone, 2014).

According to the theory of gerotranscendence, Tornstam (1997, 2011) proposes in aging a gradual awakening that promotes a change in the understanding of time and space. In alignment with Tornstam's perspective, Piedmont (2004) posits that spiritual transcendence undergoes continuous development throughout the lifespan, with a heightened progression observed in older age, particularly as individuals approach the end of life. This change is characterized by a sense of communion with the spirit of the universe and a preference for meditation and introspection (Bruyneel et al., 2005; Rajani & Jawaid, 2015; Tornstam, 1997). In this process, the person becomes more aware of the existence of a higher power and seeks enlightenment or transcendence. This increase in orientation towards spiritual transcendence associated with the aging process was soon proposed as an explanation for the maintenance of satisfaction with life (Bruyneel et al., 2005; Wadensten, 2005; Wong et al., 2016).

In summary, gerotranscendence implies a shift from a rational and materialistic perspective, characteristic of middle age in Western culture, towards a more cosmic and spiritual transcendent understanding of one's existence. This shift is accompanied by an increase in life satisfaction.

# Practical Applications of Gerotranscendence

The theory of gerotranscendence developed a series of guidelines on how to relate to and treat older people, as opposite alternative to prevailing theories of active aging. For instance, caregivers were encouraged to view the elements indicating gerotranscendence as normal signs of aging, reduce their preoccupation with the body, embrace an alternative concept of time, engage in discussions about death, select conversation topics that support and stimulate the personal growth, and promote and facilitate quiet and peaceful moments of rest (Wadensten, 2005; Wadensten & Carlsson, 2001). In therapy, it works with reminiscence and life review (Abreu et al., 2023; Bruyneel et al., 2005; Jeffers et al., 2020). All these interventions are grounded in the assumption that enhancing gerotranscendence will have a positive impact on satisfaction with life (Bauer et al., 2017; Cowlshaw et al., 2013).

Despite the considerable interest generated by these contributions in the specialized literature, the proposal has also sparked numerous resistances (Jewell, 2014; Kolb, 2014; Rajani & Jawaid, 2015).

# Critiques of Gerotranscendence: Religiosity and Centrality of Events

The primary criticisms of gerotranscendence theory relate to its universality claim. It fails to explain the experiences diversity of aging and their relationship with mental disorders such as depression, which has a wide prevalence among the older adult population (Rajani & Jawaid, 2015). Moreover, certain scholars have voiced critiques regarding its idealized portrayal of aging, characterized by an intention to 'enchant' the aging process (Jönson & Magnusson, 2001; Kolb, 2014).

Thorsen (1998) argues that aging should be situated historically and culturally, as these variables influence one's worldview and self-perception. Society also establishes ideals about the suitability of different age groups to the prevailing norms. Therefore, the phenomena associated with gerotranscendence may not be a universal trend intrinsic to aging, but rather processes situated in a historical and cultural context.

In the sense, the theory's limitation to an individual level of analysis does not consider broader social factors that could positively influence aging, such as participation in community or religious activities (Jewell, 2014; Thorsen, 1998). The concept of religious involvement or

religiosity may encompass increased social interaction, thereby potentially enhancing perceived social support and overall satisfaction with life (Mobasheri et al., 2014).

Moreover, the theory's exclusive limitation to adulthood or old age for a transcendent development process has not been empirically verified (Jönson & Magnusson, 2001). An alternative hypothesis proposes that bigger age implies a higher number of life events with the potential to "activate" a change in perspective leading to transcendence (Jewell, 2014; Ogle et al., 2014; Weiss, 2014). From this perspective, the maturity that follows such experiences becomes a turning point in the personal narrative acquiring centrality in the autobiographical memory (Olivera et al., 2020). Thus, the centrality of events describes the degree to which the event points out a transformative change on individual's life story (Berntsen & Rubin, 2012). In this regard, it's possible that the centrality of events affects spiritual transcendence to a greater extent than age, which would imply supporting the criticisms observed towards the gerotranscendence model.

# The Present Study

Considering the criticisms outlined, the aim of this study is to examine the main premise of gerotranscendence within Argentinian local context, along with its associated criticisms.

## Hypothesis

- H1.** With age, there is an increase in orientation towards spiritual transcendence.
- H2.** Increase in spiritual transcendence explains high reports of satisfaction with life.
- H3.** The centrality of events explains better than age, changes in spiritual transcendence.
- H4.** Religious involvement aids in explaining the preservation of satisfaction with life.

## Materials and Methods

### Design

A cross-sectional design following an ex post facto approach was employed, as outlined by Montero and León (2007). Consequently, no variables were manipulated, and data collection occurred at a singular time point in the months of October and November 2021.

### Participants

The non-probabilistic incidental sample consisted of a total of 370 participants residing in CABA (Argentina) of both sexes (79.2% women and 20.8% men) with ages ranging from 18 to 85 years ( $M=49.14$ ;  $SD=17.19$ ).

## Measures

### Assessment of Spirituality and Religious Sentiments Scale

The Assessment of Spirituality and Religious Sentiments Scale short form (ASPIRES SF) (Piedmont et al., 2008) is a 13-item scale that assess two dimensions: (1) Religious Index (4 items), (e.g. "How often do you pray?"), and (2) Spiritual Transcendence (9 items) (e.g. "I feel that at a higher level, we all share a common bond"). Both dimensions have a Likert-type response format with 7 response anchors that assess frequency for Religious Index and 5 response anchors based on agreement level for Spiritual Transcendence. The scale has been validated for use in the local context showing adequate psychometric properties of validity (ST:  $\chi^2(36) = 109.527$ ,  $RMSEA = .07(.04;.10)$ ,  $CFI = .97$ ,  $NNFI = .96$ ,  $IFI = .97$ ; RI:  $\chi^2(6) = 41.237$ ,  $RMSEA = .036(.00;.15)$ ,  $CFI = .98$ ,  $NNFI = .95$ ,  $IFI = .98$ ) and reliability ( $.77 \geq \alpha \leq .92$ ) (Simkin & Piedmont, 2018).

### Satisfaction with Life Scale

The Satisfaction with Life Scale (SWLS) (Diener et al., 1985) consists of 5 items that globally evaluate an individual's perception of their life (e.g. "So far I have gotten the important things I want in life"). It presents a Likert-type response format with 5 anchors according to the degree of agreement, and its psychometric properties presents adequate internal validity ( $KMO = .070$ ,  $p < .001$ ) and reliability ( $\alpha = .78$ ) for its use in the local context (Moyano et al., 2013).

### Brief Centrality of Event Scale

The Brief Centrality of Event Scale (BCES) (Berntsen & Rubin, 2006). This self-administered questionnaire consists of 7 items that assess the extent to which traumatic events are considered central to the subject's identity (e.g. "This event has influenced my way of conceiving and feeling other experiences"), using a Likert-type scale with 5 response anchors that assess the degree of agreement. For this study, the local validation conducted by Simkin et al. (2017) was employed, who reported acceptable psychometric properties of validity ( $\chi^2(21) = 8477.23$ ,  $RMSEA = .06(.03;.08)$ ,  $CFI = .99$ ,  $NNFI = .99$ ,  $IFI = .99$ ) and reliability ( $\alpha = .95$ ).

## Procedure

An online survey was designed for self-administration through social media. The survey included elements such as informed consent, inquiries about sociodemographic data (sex, age, place of residence), and various psychological measures.

## Data Analysis

The data were standardized and analyzed using the statistical software SPSSv25 and EQSv6.4. After describing the statistical behavior of the data (means, standard deviations, normality assumption, reliability analysis, etc.), the correlation between variables was estimated using Pearson's  $r$  coefficient. Next, a linear regression analysis was performed using the backward stepwise method, considering  $R$  as the indicator of effect size and adjusted  $R^2$  as the indicator of total variance. The goodness of fit of the models was confirmed through tests for multicollinearity, homoscedasticity of residuals, and no autocorrelation of errors.

The Durbin-Watson test was used to examine non-autocorrelation, with expected values between 1.5 and 2.5. The condition index and variance inflation factor (VIF) were used as indicators in diagnosing multicollinearity, with the former less than 30 and the latter less than 10. Finally, the models were tested using structural equation modeling (SEM) through the Maximum Likelihood Robust (MLR) method. To evaluate the goodness of fit of the model, the  $\chi^2$ , Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), McDonald's Fit Index (MFI), and Standardized Root Mean Square Residual (SRMR) were considered. To ensure a good fit of the model, values greater than .90 for GFI, AGFI, and MFI are suggested, while for SRMR, values up to 0.08 are considered the cutoff for adequate fit.

## Results

In Table 1, sample descriptive statistics for age by gender, were categorized into 3 groups: young, adult, and older.

**Table 1.**  
Sample descriptions: age by gender.

		frequency	%	M	DS	Min.	Max.
Young		137	37.0%	29.7	6.03	18	39
	F	96	25.9%				
	M	41	11.1%				
Adult		102	27.6%	51.8	6.59	40	60
	F	81	21%				
	M	21	5.7%				
Older		131	35.4%	67.4	5.08	61	85
	F	116	31.4%				
	M	15	4.1%				

F=female; M=male.

To explore the link between the study variables, correlations were estimated. As summarized in Table 2, the results indicate that spiritual transcendence has a significant correlation with both age (H1) and satisfaction with life (H2). Additionally, centrality of events did not reach statistical significance in relation to age but was inversely correlated with satisfaction with life (H3). Finally, while religiosity moderately correlates with age, it does not show a significant correlation with satisfaction with life (H4).

**Table 2.**  
Correlation between variables of interest

	ST	CE	RI
Age	.289**		.348**
SWL	.144**	-.162**	

ST= Spiritual Transcendence, CE= Centrality of Events, RI= religious index, SWL= Satisfaction with Life; \*\* $p < .05$ .

The variables with statistically significant relationships were tested as predictors in linear regression models, considering spiritual transcendence and satisfaction with life alternatively as dependent variables. As shown in Tables 3 and 4, the goodness of fit for both models and collinearity diagnosis were verified.



Table 3.  
Goodness of fit for regression models.

	R	R2	R2 adj.	SE	Durbin-Watson
ST	.306	.093	.088	7.16	1.93
SWL	.227	.052	.046	4.60	2.05

ST= spiritual transcendence, SWL= Satisfaction with Life

Table 4.  
Condition Index- multicollinearity

Condition Index	VIF
5.62	1.00
10.69	1.00
7.19	1.00
11.23	1.00

ST= spiritual transcendence, CE= centrality of events, SWL= Satisfaction with Life satisfaction.

The results summarized in Table 5 indicate that, when analyzing the effects on spiritual transcendence (H1), age and centrality of events (H3) appear as the most relevant explanatory variables in the model, while in the case of satisfaction with life (H2), spiritual transcendence and centrality of events make significant contributions to the explanation of variance. The variable religiosity was excluded from the model (H4).

Table 5.  
Regression analysis for Spiritual Transcendence and Satisfaction with Life.

		B	IC 95%	SE	Beta	t	Sig.
ST	(constant)	19.681	[15.992; 19.543]	1.876		10.491	.000
	Age	.127	[.085; .170]	.022	.292	5.874	.000
	CE	.113	[.003; .223]	.056	.100	2.012	.045
SWL	(constant)	17.019	[14.495; 19.543]	1.284		13.259	.000
	ST	.100	[.037; .163]	.032	.160	3.131	.001
	CE	-.125	[-.196; -.054]	.036	-.177	-3.458	.002

ST= spiritual transcendence, CE= centrality of events, SWL= satisfaction with life.

To test the model that summarizes the proposal of gerotranscendence (H1+H2), structural equation modeling was used through path analysis. Table 6 details the indicators that allow for considering a good fit of the model to the sample data.

Table 6.  
Goodness of fit

	X2(gl)	GFI	AGFI	MFI	SRMR
Gerotranscendence	23.185(6)	.98	.90	.99	.06

viding empirical support to the controversy generated by this proposal will contribute to understanding the aging process and its link to religiosity, spiritual transcendence, and satisfaction with life, at the intersection of developmental psychology (Jönson & Magnusson, 2001; Kolb, 2014), psychology of religion (Ivtzan et al., 2013; Piedmont & Friedman, 2012), and health psychology (Bauer et al., 2017; Cowlshaw et al., 2013).

## Gerotranscendence Theory: Age, Spiritual Transcendence, and Satisfaction with Life

The core of this proposal points to a shift in the perspective on life during old age, which leads to a more cosmic view of existence – spiritual transcendence – which in turn would explain the high levels of life satisfaction (Tornstam, 2011). In the present study, the premise was operationalized as (H1): age would partially explain levels of spiritual transcendence, and (H2): spiritual transcendence would partially explain levels of satisfaction with life. Initially, the link between variables was confirmed, and then their variance was explained, and finally, the proposed model was tested using path analysis. The results show the fit of the model (SRMR= .06; GFI= .98; MFI= .99) according to which Satisfaction with Life is partially explained by Spiritual Transcendence, while the latter is partially explained by age. Thus, as indicated by the main hypothesis of Tornstam's proposal (2005, 2011), as we get old there is an increase in orientation towards spiritual transcendence that partially explains the reported increase in levels of satisfaction with life.

However, as other studies have already observed (Jewell, 2014; Jönson & Magnusson, 2001), this increase linking age with spiritual transcendence is not limited to old age but can reach the whole of adulthood – over 18 years old. This observation is not trivial and raises questions about whether it is really age in its chronological aspect that allows for an explanation of the variance in spiritual transcendence, or whether it is the life experiences (for example, centrality of traumatic events) acting as latent variables.

## Centrality of Events and Age

Following the line of criticism to the model, the participation of a possible latent variable in the variance of spiritual transcendence and satisfaction with life was explored. To accomplish this, it was proposed that (H3): the centrality of events perceived in potentially traumatic events would allow for a better explanation of levels of spiritual transcendence than the variance contributed by age. Although the results show the inclusion of centrality of events in the explanatory model of spiritual transcendence, its relative contribution does not exceed the effects of age (beta values: age= .292; CET= .100). In summary, other latent variables related to chronological age could make significant contributions to the variance of spiritual transcendence, but at least in the case of centrality of events, its explanatory power does not surpass the contributions made by age.

## Discussion

The aim of this study was to explore the proposal of gerotranscendence and its adjustment in the Argentine context. We believe that pro-

On the other hand, the direct contribution of centrality of events to levels of satisfaction with life was also considered, and its inclusion in the explanatory model was reported together with spiritual transcendence. However, it should be noted that in this case, the contribution of event centrality to satisfaction with life is inverse. This could indicate that certain events that acquire centrality and become a critical moment in personal autobiography, while increasing levels of spiritual transcendence, also, mark a turning point in satisfaction with life in such a way that they decrease it. This would be in line with the Judeo-Christian tradition that promotes suffering as a means for spiritual growth (Moncada Cerón, 2021).

## Religiosity and Satisfaction with Life

Finally, following criticisms of the model that point out the lack of consideration of social factors that could contribute to aging in a positive way, we explored the possible contribution of religiosity, understood as a practice within an institutional and community framework. In this sense, it was proposed that (H4): religious involvement would make partial contributions to the explanation of life satisfaction. However, the results did not show significance in determining the variance of satisfaction with life, excluding the religiosity from the explanatory model.

Finally, religiosity was strongly linked to age ( $r = .348$ ). This finding seems to indicate that as years go by, involvement in religious practices within a community framework increase.

## Study Limitations and Future Lines of Research

Regarding the limitations, it's marked first, this study only considered age as a continuous variable and did not establish comparison by age groups according to the life stages under analysis. Second, it has only explored the centrality of events as a latent variable of age, when there may be other variables that present a better fit to the considerations, such as the type of life experiences. Also, in this study, only the contribution of social factors from the religiosity variable has been considered, while there are other relevant variables for the Argentine cultural context, such as prosocial behavior or perception of social support, which could make significant contributions to well-being in aging. Finally, this study has focused on life satisfaction, but other mental health variables such as depression or anxiety could help elucidate issues related to the universality of the gerotranscendence proposal given their high prevalence in old age.

Future studies should deepen the empirical investigation of the criticisms established to the model proposed by Tornstam. Mainly those that question its link with age and the individual level of analysis scope, which have been explored only tentatively in this work.

## Conclusions

It can be concluded that the present study has contributed to providing empirical support to the controversy surrounding gerotranscendence and, therefore, has contributed to understanding the link between aging, spirituality, and satisfaction with life. The main contribution of this work consists of exploration on chronological age's latent variables within Tornstam's proposal of gerotranscendence. Particularly, the contribution of centrality of events on spiritual transcendence guide us to focus the intervention on those events that indicate an identity turning point, making a clear before and after in the one's course of life.

## Ethical Declaration

This study complied with the ethical conduct codes established by the National Scientific and Technical Research Council (CONICET) (Res. D N° 2857/06), which include informed consent, right to information, gratuity, the option to withdraw from the study, the protection of personal data, and guarantee of confidentiality (Law 25,326). Also, the framework projects in which this study was conducted was evaluated and approved by the Ethics Committee of the Flores University.

## Data Availability Statement

The authors will provide the raw data that underpins the findings of this article, and they will do so without unwarranted restrictions.

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## Conflict of Interest

The authors assert that the study was carried out without any affiliations or financial associations that could be interpreted as a possible conflict of interest.

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