Psicothema

Psicothema 2018, Vol. 30, No. 4, 370-375
doi: 10.7334/psicothema2018.65

ISSN 0214 - 9915 CODEN PSOTEG

www.psicothema.com

Predictors of personal growth in induced abortion

Paula Barraza Illanes[1] and Fernando Calvo-Francés[2]
[1] Universidad Fernando Pessoa Canarias and [2] Universidad de Las Palmas de Gran Canaria

Abstract

Background: Knowledge about the psychological experience in induced abortion remains limited. Studies have been biased towards negative consequences. **Method:** A descriptive and prospective study was conducted. Participants were 338 adult women who came to have an induced abortion in authorized centers of Las Palmas (Spain). **Results:** A large proportion of women reflected moderate to very high personal growth at all measurement times (from 64.79% to 76.36%), with statistically significant increases. The perception of social support explained most of the variance in the cross-sectional prediction of personal growth, both at the time of the abortion and in the follow-up one month later. The variables that predicted growth longitudinally were: greater perception of the abortion as a turning point in their lives, lower level of academic education, greater frequency of thoughts about abortion one month later, lower frequency of thoughts about abortion six months later, and greater perceived social support one month later. **Conclusions:** The perception of personal growth is part of the psychological experience of abortion. This finding invites us to broaden the traditional focus on the psychological effects of induced abortion, to also include the positive outcomes.

Keywords: induced abortion, event centrality, social support, stress-related growth, subjective stress.

Resumen

***Predictores de crecimiento personal en el aborto inducido*. Antecedentes:** el conocimiento sobre la experiencia psicológica del aborto inducido sigue siendo limitado. Los estudios se han sesgado hacia las consecuencias negativas. **Método:** estudio descriptivo y prospectivo. Participaron 338 mujeres adultas que interrumpieron voluntariamente su embarazo en centros autorizados de Las Palmas (España). **Resultados:** una gran proporción de mujeres reflejó un crecimiento personal entre moderado y muy alto en todas las evaluaciones (desde un 64,79% a un 76,36%), con aumentos estadísticamente significativos. La percepción del apoyo social explicó la mayor parte de varianza en la predicción transversal del crecimiento personal, tanto en el momento del aborto como en el seguimiento un mes después. Las variables que predijeron el crecimiento longitudinalmente fueron: mayor percepción del aborto como un punto de inflexión en sus vidas, menor nivel de educación académica, mayor frecuencia de pensamientos sobre el aborto un mes después, menor frecuencia de pensamientos sobre el aborto seis meses después, y mayor percepción de apoyo social un mes después. **Conclusiones:** la percepción del crecimiento personal es parte de la experiencia psicológica del aborto. Este hallazgo invita a ampliar el enfoque tradicional sobre los efectos psicológicos del aborto inducido, para incluir también los resultados positivos.

Palabras clave: aborto inducido, centralidad del evento, apoyo social, crecimiento relacionado con el estrés, estrés subjetivo.

In recent years, the approach to the psychological experience of induced abortion has gradually extended its focus. Attention to risk, vulnerability, and harm has been expanded to include the recognition of the coexistence of both negative and positive reactions and psychological effects. Despite methodological differences, the available evidence suggests that reactions that lead to distress or suffering form a part of women's effective adaptation, along with so-called positive reactions (APA, 2008; Biggs, Upadhyay, McCulloch, & Foster, 2017; Broen, Moum, Bödtker, & Ekeberg, 2005; Kero, Högberg, & Lalos, 2004; Major et al., 2009).

At the same time, psychological aspects that were traditionally considered as negative do have a potentially positive functionality and utility. It has been proposed that both the onset of psychological distress (Joseph, Linley, Shevlin, Goodfellow, & Butler, 2006) and its persistence (Calhoun & Tedeschi, 1999) can lead to the perception of positive personal change associated with an event. These positive changes have been labelled stress-related growth, perceived benefits, thriving, blessings, positive by-products, positive adjustment, and positive adaptation (Linley & Joseph, 2004; Tedeschi & Calhoun, 2016).

Even though abortion is not a traumatic experience (APA, 2008; Biggs et al., 2017; Major et al., 2009), it involves potentially stressful demands for some women (i.eg. acknowledgment of the pregnancy, decision-making process, abortion procedure, involvement of partner or significant others). In this context, we plainly consider stress as a subjective experience, regarding the degree to which the abortion presents a significant challenge to the adaptive resources of the woman.

Theoretically, the subjective experience of induced abortion would challenge those stable assumptions that hitherto had structured her security, identity, and sense of future (Janoff-Bulman, 1992). In the process of struggling with the new reality,

Received: March 1, 2018 • Accepted: August 27, 2018
Corresponding author: Paula Barraza Illanes
Facultad de Psicología
Universidad Fernando Pessoa Canarias
35450 Sta. María de Guía (Spain)
e-mail: pbarraza@ufpcanarias.es

the woman would notice changes in her self-understanding, her personal relations, and her philosophy of life (Tedeschi & Calhoun, 1996). The opportunity of perceiving growth lies in the positive reconstruction of these assumptions.

Empirically, personal growth has been linked to a series of variables that are generally independent of the situation itself (Scrignaro, Barni, & Magrin, 2011). Research is still open to variables such as subjective perception of stress (Laufer & Solomon, 2006), the time elapsed (Shakespeare-Finch & Lurie-Beck, 2014), social support in crucial moments (Prati & Pietrantoni, 2009), and different variables of cognitive processing, such as rumination (Cann et al., 2011), seeking meaning (Park, Edmondson, Fenster, & Blank, 2008), or event centrality (Groleau, Calhoun, Cann, & Tedeschi, 2013). Studies conducted worldwide offer favorable results but, no doubt, cultural factors will be involved in personal growth and the associated processes (Calhoun, Cann, & Tedeschi, 2010; Vázquez, Pérez-Sales, & Ochoa, 2014). To our knowledge, the available data with Spanish population are still limited.

With regard to induced abortion, the panorama in Spain resembles that of other nations whose advances in legislative matters and political health allow access to medically safe abortion by free decision. Abortion has been decriminalized since 1985, and since 2010, its regulation is similar to that of other countries of the European Union. The rate seems to have stabilized around 12 abortions per thousand women per year (Ministerio de Sanidad, Servicios Sociales e Igualdad, 2015).

This work offers some relevant results from a more extensive study on the process of psychological experience in induced abortion. Its goals are to describe the perception of positive personal growth in induced abortion, to determine how growth varies over time, and to identify the variables that predict its occurrence, both cross-sectionally and longitudinally.

Method

We present a descriptive study with a longitudinal design and repeated measures in a group of adult women who had an induced abortion.

Participants

Consecutive nonprobabilistic sampling was used to select the sample. Participants were recruited in the authorized centers in a Spanish province in which all non-therapeutic abortions are performed. During the period of data collection, voluntary participation was offered to all women who met the inclusion criteria: abortion at the woman's request, not subject to medical recommendation, pregnancy not a consequence of rape, older than 18 years of age, and with sufficient knowledge of written and spoken Spanish. Of the 630 women who met the inclusion criteria at T0, 358 women (56.83%) agreed to participate voluntarily. Thirteen participants were eliminated due to incomplete data (more than 10% missing responses), and seven more due to atypical response patterns. The initial sample was made up of 338 participants (Table 1). The participants did not receive any compensation. All abortions were performed by the suction method, with less than 14 weeks of gestation.

The women who agreed and those who refused to participate did not differ in educational attainment, country of origin, or previous history of induced abortion. However, there were significant differences in other variables. The group that agreed to participate was younger, $t(608) = -3.81$, $p < .001$, there were more women who had a partner at the time of the abortion, $\chi^2(1) = 5.67$, $p = .017$, with one or more children, $\chi^2(1) = 4.06$, $p = .044$, unemployed, studying, or caring for the home and the family, $\chi^2(4) = 30.51$, $p < .001$, and fewer women living alone, $\chi^2(1) = 17.23$, $p < .001$.

With regard to adherence, 50% of the participants were retained at the first follow-up ($n = 169$), and of them, 65.09% were retained at the second one ($n = 110$).

No significant differences were found in the composition of the sample, in any of the sociodemographic variables considered, because of dropout through the three moments evaluated (T0, T1 and T2).

Instruments

In addition to a questionnaire to gather sociodemographic data (see Table 1), we used the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996). It measures the magnitude of perceived personal growth associated with an event. We used an available Spanish translation (Páez et al., 2011) at all three measurement times. It consists of 21 statements rated on a six-

Table 1
Descriptive of demographic characteristics of participants

	Frequency	Percentage
Age		
18-19	35	10.36
20-24	93	27.51
25-29	86	25.44
30-34	64	18.93
35-39	42	12.43
40-44	17	5.03
> 45	1	0.30
Couple relationship		
With partner	268	79.29
Without partner	70	20.71
Cohabitation		
Alone	22	6.51
With other people	316	93.49
Parity		
None	140	41.42
One or more children	198	58.58
History of abortion		
None	221	65.38
One or more previous abortions	117	34.62
Work status		
Working	136	40.24
Unemployed	130	38.46
Studying	45	13.32
Caring for home and family	21	6.21
Other	6	1.77
Educational attainment		
Primary school	57	16.86
Junior high school	147	43.49
High school	69	20.42
University/college	45	13.31
Postgraduate	20	5.92
Birthplace		
Spain	273	80.77
Abroad	65	19.23

point Likert scale. It was necessary to transform the scores (x^2) to adapt them to a normal distribution. Internal consistency was α = .93, and one-month test-retest reliability was r = .66 (p < .001). Factor analysis with the method of the original study (Tedeschi & Calhoun, 1996) did not replicate the five-factor structure, and analysis using the polychoric correlation matrix confirmed a single factor underlying this sample and data.

We applied the Differential Adjectives Inventory to Study Mood (Tous & Andrés-Pueyo, 1991), designed and validated with Spanish population, to assess subjective stress. We used the Stress dimension (eight pairs of adjectives) to assess situational stress perceived at T0. It reflects the level of activation caused by the negative interdependence of the situation's demands and the person's expectations. It employs a seven-point semantic differential. Item-test analysis and verification of the factorial composition advised deleting one of the pairs of adjectives. The resulting reliability was established using the Cronbach's alpha (α = .79) and the Heise and Bohrnstead omega (ω = .85) coefficients.

Social support was evaluated with the Relevant Persons scale of the Interpersonal Support Links questionnaire VIDA (Alemán & Calvo-Francés, 2016), with eight affirmatively drafted items and a four-point Likert response option. This scale provides information on the perceived social support provided by significant persons, regardless of whether they are family, partner or friends. We used it at all measurement times. This questionnaire was designed and validated with Spanish population. Internal consistency was α = .92, and one-month test-retest reliability was r = .80 (p < .001).

We selected and adapted the translation and back-translation of Item 18 ("Abortion was a turning point in my life") of the Events Centrality Scale (Berntsen & Rubin, 2006) to measure event centrality at T2. The length of the original instrument (20 items) exceeded the purpose of this study, and the Spanish validation is not yet available. The scale appraises the centrality of an event in a person's identity and history, on a five-point Likert scale.

Finally, we drafted one *ad hoc* question "How often do you think about circumstances of pregnancy, decision and interruption itself?" to know the frequency with which the woman thought about (rumination) what had happened at T1 and T2, using a four-point Likert scale: 1 = *never or hardly ever*; 2 = *sometimes*; 3 = *often*; 4 = *all the time*.

Procedure

The approach was multicenter. A baseline measure was taken on the day of the abortion, just before the procedure (T0), next one month later (T1) and the last one six months after the abortion (T2).

The protocol was the same for all the participating centers. Duly instructed staff presented the study to the women who met the inclusion criteria. Those who refused to participate provided anonymous sociodemographic data voluntarily in order to know their profile. Those who agreed to participate signed an informed consent form and completed a set of questionnaires in paper format while waiting for the induction of the abortion.

The two follow-up measures (T1 and T2) were done by electronic mail or telephone call, depending on the participant's choice. Three contacts without response were considered dropout.

The general managements of the centers approved the terms and conditions of the research. The study complies with the ethical principles of the Declaration of Helsinki (World Medical Association, 2013) and the European Federation of Psychologists' Associations (2005). It also follows the principles of democratic legality established in the Spanish State.

Data analysis

Chi-square, related samples T, and Mann-Whitney test, were used to check differences in the composition of the sample over time. In addition, related samples T and Cohen´s d were used to explore the differences in stress related growth over time. Cramer´s V was used to measure the association between nominal variables. The one-way ANOVA allowed us to compare the growth scores among different categories. The main process consisted of the stepwise regression analysis method, without forcing the entry of any variable. P-values lower or equal to .05 were considered as statistically significant. The calculations were performed using the SPSS 19.0 and FACTOR 9.3 programs (Lorenzo-Seva & Ferrando, 2006).

Results

According to the score on the PTGI, 64.79% of the participants reflected moderate to very high growth at T0. This proportion increased to 73.37% at T1, and to 76.36% at T2.

Scores were high at all times. The mean score at T0 was 65.22 (SD = 23.41), at T1 was 70.78 (SD = 23.43), and at T2 74.05 (SD = 24.87). There was a significant increase between T0 and T1, $t(608)$ = -4.47, p < .001, d = 0.24; and a new significant increase between T1 and T2, $t(109)$ = -5.20, p < .001, d = 0.14.

Perceived personal growth was not related to other control variables of the more extensive study: age, country of origin, prior history of induced abortion, prior mental health, or physical symptoms resulting from the abortion.

Cross-sectional prediction of personal growth at T0

By means of multiple regression analysis (Table 2), we determined the variables that cross-sectionally explained the variance of growth at T0, $F(3, 334)$ = 12.31, p < .001, R^2 = .10, $R^2_{corrected}$ = .09. Firstly, and with a higher contribution, was greater perception of social support, β = .27, $t(334)$ = 5.07, p < .001; secondly, lower academic level achieved, β = -.18, $t(334)$ = -3.52, p < .001; and lastly, greater perception of subjective stress, β = .13, $t(334)$ = 2.42, p = .016.

Table 2
Multiple regression analysis. Cross-sectional predictors of personal growth at T0

	Personal growth at T0 n = 338		
	b	**SE b**	**β**
Constant	-48.32	87.15	
Social support	6.71	1.32	.27***
Educational attainment	-19.91	5.66	-.18***
Subjective stress	0.22	0.09	.13*
R^2		.10	
F		12.31***	

* p < .05; *** p < .001

Regarding attained educational level, we conducted a one-way ANOVA with Dunnett *post hoc* test, which determined that growth was significantly higher, $F(3, 334) = 2.65$, $ECM = 14069.05$, $p = .049$, $\eta^2 = .02$, in the category of primary studies ($M = 69.05$) than in those of university studies ($M = 60.53$), or postgraduate studies ($M = 56.40$). Another interesting difference was that, in the group with primary studies, there were significantly fewer women (Cramer's $V = .15$, $p = .032$), in an active work situation (35.08%), compared with those who had completed university or higher studies (53.85%).

Cross-sectional prediction of personal growth at T1

Regression analysis using the same method (Table 3) also indicated the amount of significant variance that was explained by the variables at T1, $F(3, 167) = 8.69$, $p < .001$, $R^2 = .10$, $R^2_{corrected} = .08$. Firstly, was perceived social support, $\beta = .26$, $t(167) = 3.49$, $p = .001$; and secondly, the frequency of thoughts about abortion, $\beta = .22$, $t(167) = 2.94$, $p = .004$. At T2, the statistical assumptions for the analysis were not met.

Longitudinal prediction of personal growth

A new analysis was conducted (Table 4) to determine the variables of the entire study that predicted the level of growth at the end of it, finding five variables that explained 40% of the significant variance of growth, $F(5, 104) = 13.73$, $p < .001$, $R^2 = .40$, $R^2_{corrected} = .37$. Firstly, was higher event centrality, $\beta = .47$, $t(104) = 5.93$, $p < .001$; then lower level of educational attainment, $\beta = -.23$, $t(104) = -2.86$, $p = .005$; thirdly, frequency of thoughts about abortion at T1, $\beta = .34$, $t(104) = 3.71$, $p < .001$; followed by lower frequency of thoughts about abortion at T2, $\beta = -.20$, $t(104) = -2.23$, $p = .028$; and lastly, greater perceived social support at T1, $\beta = .17$, $t(104) = 2.15$, $p = .034$.

It was verified that attrition did not produce a significant change in the variables that remain in the regression analysis models. In educational level attained there were no differences between T0 and T1, $\chi^2(4) = 3.80$, $p = .434$; T1 and T2, $\chi^2(4) = 1.34$, $p = .854$; and T0 and T2, $\chi^2(4) = 1.97$, $p = .741$. In perceived social support, the Mann-Whitney test was not significant between T0 and T1 ($U = 13653.00$, $p = .465$); T1 and T2 ($U = 2903.50$, $p = .235$); and T0 and T2 ($U = 12372.00$, $p = .835$). Attending to stress related growth, there were no significant differences between T0 and T1, $t(336) = 0.86$, $p = .391$; T1 and T2, $t(167) = -1.95$, $p = .053$; and T0 and T2, $t(107) = 0.60$, $p = .552$. Finally, no statistically significant differences were found in rumination between the participants who continued and those who abandoned ($U = 2967.00$, $p = .321$).

Table 3
Multiple regression analysis. Cross-sectional predictors of personal growth at T1

	Personal growth at T1 n = 169		
	b	**SE b**	**β**
Constant	64.04	58.46	
Social support	5.62	1.61	.26**
Rumination	33.48	11.41	.22**
R^2		.10	
F		8.69***	

** $p < .01$; *** $p < .001$

Table 4
Multiple regression analysis. Longitudinal predictors of personal growth

	Personal growth n = 110		
	b	**SE b**	**β**
Constant	8.60	75.52	
Event centrality	51.28	8.64	.47***
Educational attainment	-28.04	9.80	-.23**
Rumination T1	56.41	15.20	.34***
Rumination T2	-29.07	13.07	-.20*
Social support T1	4.37	2.03	.17*
R^2		.40	
F		13.73***	

* $p < .05$; ** $p < .01$. *** $p < .001$

Discussion

This work shows evidence, prospectively and longitudinally, of the perception of growth in induced abortion. At the same time, it addresses some of the variables that contribute to the explanation of its occurrence.

The high scores at all measurement times were similar to those collected in the face of other events (Tedeschi & Calhoun, 1996). The pattern of gradual and significant increase over time supports some findings of longitudinal studies (Manne et al., 2004). In accordance with the proposal of a curvilinear relationship between growth and the elapse of time (Prati & Pietrantoni, 2009), we could assimilate the six-month period of this study to the ascending section of the curve.

A higher level of subjective situational stress explained a small but significant proportion of the variance of growth, but only cross-sectionally. It has been proposed that the likelihood of developing growth increases as a function of the intensity of the symptoms surrounding an experience (Saccinto, Prati, Pietrantoni, & Pérez-Testor, 2013). Subjective stress related to abortion would be the catalyst that triggers the process of growth, although it loses relevance over time and other aspects participate longitudinally.

The consideration of induced abortion as a central event reflects the remarkable change in women's personal perspective. The magnitude and direction of its longitudinal predictive capacity for growth suggests that this turning point would have a positive meaning for women. Its relevance as a predictor of growth is a consistent outcome in the literature (Groleau et al., 2013).

A lower level of academic attainment was a cross-sectional and longitudinal predictor of growth. To interpret the higher growth in women with primary studies, it is necessary to consider this group's greater proportion of unemployment and dedication to the care of the home and family. These women may feel more isolated and alienated, more accustomed to routine, unchallenging tasks. For them, the experience of the abortion could lead to the necessary level of prominence, challenge, and autonomy for them to perceive a significantly larger amount of change than the women with higher academic level.

With regard to the predictive role of the frequency of thoughts, growth is explained longitudinally by a high frequency of thoughts about abortion one month later, and a low frequency six months later. Firstly, the greater presence of both intrusive and deliberate

rumination (Taku, Cann, Tedeschi, & Calhoun, 2009) would contribute to the perception of growth soon after the abortion. This greater exposure to representations about the pregnancy, the decision to abort, and the abortion will lead women towards integrating the experience into a coherent model of themselves. Secondly, the lower frequency of thoughts as time elapses could reflect the decline of intrusive rumination in favor of deliberate rumination, more clearly related to the perception of growth (Saccinto et al., 2013).

Greater perceived social support predicted the occurrence of growth cross-sectionally and longitudinally. Cross-sectionally, it helped to explain a proportion of the variance of growth on the day of the abortion and one month later. Perceived social support is a key element in psychological integration in induced abortion (APA, 2008), and it has been confirmed that it contributes to the perception of growth (Prati & Pietrantoni, 2009). However, it is relevant that longitudinally, greater social support one month after the abortion was predictive of the perception of growth. Having the necessary support at this early stage of the crisis could be crucial for the perception of growth.

Some limitations need to be considered. The participation was 57% of the potential sample; however, this proportion did not differ from other researchers' rates (Broen et al., 2005, Lundell et al., 2013). Only 32.5% of the initial sample completed all phases. At best, other works report around 50% retention, but with some compensation (Lundell et al., 2013). The explained variance is low, therefore, there are other aspects not addressed. In any case, it provides clues to a new study design. Finally, for the measurement of rumination and centrality of the event, single-item instruments were used. It was an ethical decision, not a methodological one, given the volume reached by the evaluation. In any case, it is a solution already tested by other authors in this area (Major et al., 2000).

Summing up, over time, women perceive a positive personal change beginning with the level of the abortion's stressful impact on them and depending on certain personal characteristics. Variability in the frequency of thoughts about the event at different times, perceived social support by relevant people immediately after the abortion, and, especially, the consideration of the abortion as a personal turning point in their life history all play a relevant role.

These findings invite one to deepen understanding of the psychological experience of induced abortion. Theoreticians, researchers, and clinical staff are all ethically and socially responsible for attempting to reflect this reality honestly and comprehensively. We trust that this work will contribute to stimulating the balanced development of the field.

Acknowledgments

The authors wish to thank the participating centers for their cooperation and openness to conduct this study. We especially thank the nursing staff, social workers, and psycho-pedagogues for their support in the first contact with the participating women and their collaboration in the collection of data.

References

Alemán, I., & Calvo-Francés, F. (2016). Validation of the Interpersonal Support Links Scale VIDA. *Anales de Psicología, 33*(1), 168-179. doi:10.6018/analesps.33.1.232341

American Psychological Association, Task Force on Mental Health and Abortion (2008). *Report of the APA task force on mental health and abortion*. Retrieved from http://www.apa.org/pi/wpo/mental-health-abortion-report.pdf

Berntsen, D., & Rubin, D. C. (2006). The Centrality of Event Scale: A measure of integrating a trauma into one's identity and its relation to post-traumatic stress disorder symptoms. *Behaviour Research and Therapy, 44*(2), 219-231. doi: 10.1016/j.brat.2005.01.009

Biggs, M. A., Upadhyay, U. D., McCulloch, C. E., & Foster, D. G. (2017). Women's Mental Health and Well-being 5 Years After Receiving or Being Denied an Abortion. *JAMA Psychiatry, 74*(2), 169-178. doi: 10.1001/jamapsychiatry.2016.3478.

Broen, A. N., Moum, T., Bödtker, A. S., & Ekeberg, Ö. (2005). The course of mental health after miscarriage and induced abortion: A longitudinal, five-year follow-up study. *BioMedCentral Medicine 3*(1), 18. doi: 10.1186/1741-7015-3-18

Calhoun, L. G., & Tedeschi, R. G. (1999). *Facilitating posttraumatic growth: A clinician's guide*. Mahwah, NJ: Erlbaum.

Calhoun, L. G., Cann, A., & Tedeschi, R. G. (2010). The posttraumatic growth model: Sociocultural considerations. In Z. Weiss & R. Berger (Eds.), *Posttraumatic growth and culturally competent practice: Lessons learned from around the globe* (pp. 1-14). Hoboken, NJ: Wiley.

Cann, A., Calhoun, L. G., Tedeschi, R. G., Triplett, K. N., Vishnevsky, T., & Lindstrom C. M. (2011). Assessing posttraumatic cognitive processes: The event related rumination inventory. *Anxiety, Stress and Coping: An international journal, 24*(2), 137-156. doi: 10.1080/10615806.2010.52990

European Federation of Psychologists' Associations (2005). *Meta-Code of Ethics*. Retrieved from http://ethics.efpa.eu/download/54fb9f885725e219c3aa3a7db1eb69a8

Groleau, J. M., Calhoun, L. G., Cann, A., & Tedeschi, R. G. (2013). The role of centrality of events in posttraumatic distress and posttraumatic growth. *Psychological Trauma: Theory, Research, Practice, and Policy, 5*(5), 477-483. doi: 10.1037/a0028809

Janoff-Bulman, R. (1992). *Shattered assumptions: Towards a new psychology of trauma*. New York: Free Press.

Joseph, S., Linley, P. A., Shevlin, M., Goodfellow, B., & Butler, L. D. (2006). Assessing positive and negative changes in the aftermath of adversity: A short form of the Changes in Outlook Questionnaire. *Journal of Loss and Trauma: International Perspectives on Stress & Coping, 11*(1), 85-99. doi: 10.1080/15325020500358241

Kero, A., Högberg, U., & Lalos, A. (2004). Wellbeing and mental growth - long-term effects of legal abortion. *Social Science and Medicine, 58*(12), 2559-2569. doi: 10.1016/jsocscimed.2003.09.004

Laufer, A., & Solomon, Z. (2006). Posttraumatic symptoms and posttraumatic growth among Israeli youth exposed to terror incidents. *Journal of Social and Clinical Psychology, 25*(4), 429-447. doi: 10.1521/jscp.2006.25.4.429

Linley, P. A., & Joseph, S. (2004). Positive Change Following Trauma and Adversity: A Review. *Journal of Traumatic Stress, 17*(1), 11-21. doi: 10.1023/B:JOTS.0000014671.27856.7e

Lorenzo-Seva, U., & Ferrando, P. J. (2006). FACTOR: A computer program to fit the exploratory factor analysis model. *Behavior Research Methods, 38*(1), 88-91. doi: 10.3758/BF03192753

Lundell, I. W., Öhman, S. G., Frans, Ö., Helström, L., Högberg, U., Nyberg, S., Poromaa, I. S., Sydsjö, G., Östlund, I., & Svanberg, A. S. (2013). Posttraumatic stress among women after induced abortion: A Swedish multi-centre cohort study. *BioMed Central Women's Health, 13*(1), 52. doi: 10.1186/1472-6874-13-52

Major, B., Applebaum, M., Beckman, L., Dutton, M. A., Russo, N. F., & West, C. (2009). Abortion and mental health: Evaluating the evidence. *American Psychologist, 64*(9), 863-890. doi: 10.1037/a0017497

Major, B., Cozzarelli, C., Cooper, M. L., Zubeck, J., Richards, C., Wilhite, M., & Gramzow, R. H. (2000). Psychological responses of women after first-trimester abortion. *Archives from General Psychiatry, 57*(8), 777-784. doi: 10.1001/archpsyc.57.8.777

Manne, S., Ostroff, J., Winkel, G., Goldstein, L., Fox, K., & Grana, G. (2004). Posttraumatic growth after breast cancer: Patient, partner and couple perspectives. *Psychosomatic Medicine, 66*(3), 442-454. doi: 10.1097%2F01.psy.0000127689.38525.7d

Ministerio de Sanidad, Servicios Sociales e Igualdad (2015). *Interrupción voluntaria del embarazo. Datos definitivos correspondientes al año 2013* [Voluntary termination of pregnancy. Final data corresponding to the year 2013]. Retrieved from https://www.msssi.gob.es/profesionales/saludPublica/prevPromocion/embarazo/docs/IVE_2013.pdf

Páez, D., Vázquez, C., Bosco, S., Gasparre, A., Iraurgi, I., & Sezibera, V. (2011). Crecimiento post estrés y post trauma: posibles aspectos positivos y beneficiosos de la respuesta a los hechos traumáticos [Post-stress and post-trauma growth: Possible positive and beneficial aspects of the response to traumatic events]. In D. Páez, C. Beristain, J. González, N. Basabe & J. De Rivera (Eds.). *Superando la violencia colectiva y construyendo cultura de paz* [Overcoming collective violence and building a culture of peace] (pp. 311-339). Madrid: Fundamentos.

Park, C. L., Edmondson, D., Fenster, J. R., & Blank, T. O. (2008). Meaning making and psychological adjustment following cancer: The mediating roles of growth, life meaning, and restored just-world beliefs. *Journal of Consulting and Clinical Psychology, 76*(5), 863-875. doi:10.1037/a0013348

Prati, G., & Pietrantoni, L. (2009). Optimism, social support and coping strategies as factors contributing to Posttraumatic growth: A meta-analysis. *Journal of Loss and Trauma: International Perspectives on Stress and Coping, 14*(5), 364-388. doi: 10.1080/15325020902724271

Saccinto E., Prati G., Pietrantoni L., & Pérez-Testor, C. (2013). Posttraumatic stress symptoms and posttraumatic growth among Italian survivors of emergency situations. *Journal of Loss and Trauma, 18*(3), 210-226. doi: 10.1080/15325024.2012.687321

Scrignaro, M., Barni, S., & Magrin, M. E. (2011). The combined contribution and social support and coping strategies in predicting post-traumatic growth: A longitudinal study on cancer patients. *Psycho-Oncology, 20*(8), 823-831. doi: 10.1002/pon.1782

Shakespeare-Finch, J., & Lurie-Beck, J. (2014). A meta-analytic clarification of the relationship between posttraumatic growth and symptoms of posttraumatic distress disorder. *Journal of Anxiety Disorders, 28*(2), 223-229. doi: 10.1016/j.janxdis.2013.10.005

Taku, K., Cann, A., Tedeschi, R. G., & Calhoun, L. G. (2009). Intrusive versus deliberate rumination in posttraumatic growth across US and Japanese samples. *Anxiety, Stress & Coping, 22*(2), 129-136. doi: 10.1080/10615800802317841.

Tedeschi, R. G., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9*(3), 455-471. doi: 10.1002/jts.2490090305

Tedeschi, R. G., & Calhoun, L. G. (2016). Posttraumatic growth. In H. S. Friedman (Ed.), *Encyclopedia of Mental Health, 2nd ed.* (pp. 305-307). Oxford: Elsevier.

Tous, J. M., & Andrés-Pueyo, A. (1991). *IDDA-EA: Inventario Diferencial de Adjetivos para el Estudio del Estado de Ánimo* [Differential Inventory of Adjectives for the Study of Mood]. Madrid: TEA Ediciones.

Vázquez, C., Pérez-Sales, P., & Ochoa, C. (2014). Posttraumatic growth: Challenges from a cross-cultural viewpoint. In G. A. Fava & C. Ruini (Eds.), *Increasing psychological well-being in clinical and educational settings. Interventions and cultural contexts* (pp. 57-74). Nueva York, NY: Springer-Verlag. doi: 10.1007/978-94-017-8669-0_4

World Medical Association (2013). World Medical Association declaration of Helsinki. Ethical principles for medical research involving human subjects. *Journal of the American Medical Association, JAMA, 310*(20), 2191-2014. doi: 10.1001/jama.2013.281053