



## THE LIMITS OF POSITIVE INTERVENTIONS

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*Las intervenciones positivas han tenido un amplio desarrollo en los últimos años, y ya se están evaluando y aplicando en muy distintos campos. A pesar de que la gran mayoría de los resultados disponibles en relación a su eficacia se pueden considerar buenos o muy buenos, no se puede descartar la posibilidad de que en algunos casos concretos algunas intervenciones puedan tener efectos inesperados e incluso contraproducentes. En este artículo se revisará investigación procedente de distintas fuentes para poder informar adecuadamente sobre qué intervenciones pueden ser inapropiadas para personas con ciertas características o rasgos de vulnerabilidad. Finalmente, se hace una reflexión sobre la importancia de que las intervenciones positivas sean llevadas a cabo con el máximo cuidado y rigor incluso en personas que no presentan problemas ni trastornos psicológicos manifiestos.*

**Palabras clave:** Psicología positiva, Fortalezas, Intervenciones positivas, Emociones positivas, Efectos adversos.

*Positive interventions have been developed extensively in recent years and they have been tested and applied in very diverse settings. Despite the fact that most of the findings regarding their efficacy can be considered from positive to very positive, the possibility that, in some cases, positive interventions may have unexpected or even iatrogenic effects cannot be discarded. In this article, research from several sources is reviewed in order to inform decisions about what interventions might be inadequate for cases with specific characteristics or vulnerability traits. Finally, the importance of using positive interventions with caution and rigor even when working with individuals who do not have overt problems or psychological disorders is discussed.*

**Key words:** Positive psychology, Strengths, Positive interventions, Positive emotions, Adverse effects

**P**ositive psychology has undergone significant development in its short life. The existence of a significant gap in the research on many positive research topics initially attracted the attention of many academics, who understood that being involved in addressing these issues should be a priority (Seligman & Csikszentmihalyi, 2000). Later, the first results of basic and applied research on the effects of positive interventions amplified this interest (Vázquez, Hervás, & Ho, 2006), which became widespread not only among academics and researchers, but also a good number of practitioners and even in the general population (Hervás, 2009).

In recent years, the research on positive interventions has increased considerably, and the results could be said to be better than expected (see review in Bolier et al., 2013). The fact that several positive interventions, in many cases very short ones (i.e., one week), have positive effects on well-being and depressive symptoms sometimes up to 6 months after completion of the intervention is nothing less than astonishing. Obviously the process of refinement of these interventions as well as the understanding of the mechanisms of change is still in progress,

so it is possible that the results may improve further in the coming years. In the same vein, to the extent that the application of more complete positive intervention packages (e.g., Chaves, López-Gómez, Hervás, & Vázquez, 2016) becomes widespread, it may reach a higher degree of transformation and, therefore, the improvement found would be expected to be more durable.

These promising results, however, should not be an excuse to apply these techniques indiscriminately or carelessly. We know from previous research that psychological interventions, in general, can be harmful in certain contexts, particularly in some unusual modalities (Lilienfeld, 2007). Given the absence of external institutions that can assess the adverse effects of psychological treatments—which do however exist in the drug approval process—, a greater awareness of this issue in psychology is especially important, beyond the known recommendations of the ethical code (e.g., COP, 1987). For example, in a recent survey in the UK, about 5% of respondents reported having suffered adverse effects after psychological intervention (Crawford et al., 2016). Thus, this is a very relevant issue today, not only for positive psychology, but for the field of psychological interventions in general (see Barlow, 2010).

In this article we focus on the possible existence of limits in positive psychology interventions. Specifically, the question is this: is it possible that some components or interventions, which fundamentally appear to be linked in the research to positive results, can at certain levels or in certain circumstances cause adverse effects? Therefore, in this article, we will describe some

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data that we already have available that can help guide research and practice in a more balanced direction. Without claiming to be exhaustive, we will review interventions within positive psychology that have received the most attention and for which direct or indirect data are available concerning the existence of limits in their application.

### THE BENEFITS OF POSITIVE EMOTIONS

The concept of positive emotions comes from studies on the circumplex model of affect (Russell, 1980), and the name came about because when we analyze how emotions tend to cluster from an empirical point of view, the most important factor of variation is to distinguish those that are subjectively pleasing (i.e., positive emotions) from those that are unpleasant (i.e., negative emotions). The research on positive emotions accelerated considerably after the appearance of positive psychology, and one of the milestones that marked its development was the emergence of the theory of broaden and build (Fredrickson, 2001). This theory, which we will not cover in detail here for reasons of space, posits that positive emotions have enormous value due to the possibilities of adaptation and development that they provide, which explains why they have persisted as part of our response repertoire over the course of evolution. The research on the beneficial effects of positive emotional states, which began with the studies of Alice Isen in the 1970s, has been quite consistent with these initial hypotheses. The conclusion of the numerous investigations (both longitudinal and experimental, not only correlational) is very clear: in the general population, the effect of positive emotions has important benefits for psychological and even physical functioning. Again, it is a very broad topic to cover here, but it could be summarized by saying that positive emotions, in addition to better health (e.g., Presman & Cohen, 2005; Vázquez, Hervás, Rahona, & Gómez, 2009), promote significant advantages at the interpersonal, cognitive, and emotional-motivational levels (e.g., Fredrickson, 1998; Lyubomirsky, King, & Diener, 2005) as well as in different contexts, such as the academic (e.g., King, McInerney, Ganotice, & Villarosa, 2015) or work contexts (e.g., Coté, 2014; Meneghel, Salanova, & Martínez, 2014). Finally, the increase in the evaluation of interventions focused on increasing positive emotions in recent years has allowed us to observe, experimentally, these effects with greater external validity (Parks & Schueller, 2014).

That said, and before addressing the possible limits of positive emotions, there are two important aspects that should be clarified. The first clarification concerns the fact that when we say that, in general, positive emotions generate beneficial effects, it does not mean that negative emotions do not have them as well. The emphasis on the value of positive emotions has emerged because, until recently, these emotions were

considered a minor player in psychological functioning and were given little adaptive value. The novelty has been the discovery that this is not the case and that, on the contrary, it is very relevant to have an adequate level of positive emotionality. The essential adaptive value of negative emotions (i.e., unpleasant ones) is something that has been assumed by psychology for decades, and previously in other disciplines that considered and expanded the studies and theories of Charles Darwin. Therefore, highlighting the utility of positive emotions does not mean endorsing the idea that negative emotions are useless or harmful at all. This is an idea that, probably because it is so widespread, is rarely explicit in the context of the study of positive emotions.

Secondly, we must say that positive emotions do not produce advantages in all contexts. For example, in contexts in which threats are frequent and reacting quickly to them is important, experiencing positive emotions could be a disadvantage (e.g., Ford et al., 2010). The same holds true for other contexts, such as those where we do not want stereotypes to occur (Unkelbach, Forgas, & Denson, 2008), or where a very analytical processing of the necessary information is needed, in which the use of heuristics is avoided (see review by Bless & Fiedler, 2006), among others (see Forgas, 2013). Investigating these particular situations where positive emotions can be an impediment to full adaptation is important in order to be able to understand in which circumstances it may be useful to regulate positive emotions, beyond the most obvious social situations (e.g., Erber & Erber, 2000).

In any case, these particular results should not be used to conceal or minimize the results to a more general level that solidly supports the idea that people who have a high frequency of positive emotions in general show better functioning at all levels studied (e.g., Lyubomirsky et al, 2005). Again, this does not mean that it is impossible to have a high level of functioning with a moderately low level of positive emotionality, since the results show tendencies at the group level not at the individual level. Nor can it be deduced from these studies that to be cheerful is "mandatory" or that positive emotionality is prescribed as a necessary and sufficient condition for mental health (see Vázquez, 2013).

### CAN POSITIVE EMOTIONS BECOME EXCESSIVE?

Just as negative emotions can be beneficial in some cases and detrimental in others, we should ask an equivalent question in relation to positive emotions (Oros, 2015). Although the research is far from complete, the data we have suggest that the answer is yes, positive emotions can become harmful. Below we discuss the various aspects of this phenomenon.

First, we must analyze whether positive emotions can be excessive, taking into account two basic dimensions of emotions: intensity and frequency. Thus, the question is this: can positive



emotions reach an excessive level of intensity or frequency?

In terms of intensity, there is evidence that a very high intensity/reactivity in relation to positive emotions seems to be associated with poorer life satisfaction (e.g., Diener, Sandvik, & Pavot, 1991), and it even appears to be a marker of vulnerability to mania (Johnson, 2005; Meyer, Johnson, & Winters, 2001; Gruber, 2011). Therefore, in the case of intensity, it could be said that there is an inverted U effect, that is, that very low or very high levels of intensity in positive emotions are associated with worse adaptation in comparison with a moderate level (Diener et al., 1991).

As for the frequency, the results also suggest that the potential benefits associated with greater or lesser frequency of positive emotionality could also form an inverted U, although as we shall see, with regards to the pole of high frequency, it is not so clear that it is maladaptive as seems to be the case with intensity.

Most of the available evidence we will review here refers to the rate of positive versus negative emotions. What is observed is that, beyond the fact that there is no magic number to describe when this rate produces an accelerated increase in its benefits (Brown, Sokal, & Friedman, 2013), the results confirm that lower rates—the same or fewer negative emotions than positive ones—are associated with negative results (e.g., Schwartz et al., 2002), intermediate rates between two and four positive emotions for every negative emotion show the best results of adaptation (Diehl, Hay, & Berg, 2011; Kolanowski, Van Haitsma, Meeks, & Litaker, 2014; Trute, Benzies, Worthington, Reddon, & Moore, 2010). And finally, there is also evidence that excessively high rates of positive versus negative emotions may not be associated with improved adaptation, or they may even be slightly maladaptive. And this has been observed in both healthy adults (Rego, Sousa, Marques, & Cunha, 2012) and more clearly in people under stress and adversity (Shrira et al., 2011). Bearing in mind that other studies have not found this negative effect in participants who had higher rates of positive emotionality (e.g., Diehl et al., 2011), together with the absence of longitudinal studies that show the adverse effect prospectively, we must conclude that it is early to say that a high frequency of positive emotions may have drawbacks. The wisest option would therefore be to wait to have further studies. In addition, as observed by Fredrickson (2013), the way positive and negative emotions are measured is slightly different in each study, which could affect the result obtained in relation to the optimal rate and the point from which a high rate is associated with maladaptive outcomes.

It also should be noted that the adverse effect that may be found when the rate of positive vs. negative emotions is high may be due, not so much to the frequency of positive emotions being abnormally high, but rather to an extremely low frequency of negative emotions (Fredrickson, 2013; Shrira et

al., 2011), which may reflect in reality a problem of artificial inhibition of negative emotionality rather than an excess of positive emotions.

Therefore, it seems clear that there is a potential adverse effect in the presence of positive emotions of great intensity, and less likely, although it should not be ruled out, an adverse effect to a disproportionate frequency of positive emotions versus negative ones.

#### ARE THERE POPULATIONS IN WHICH INCREASED POSITIVE EMOTIONALITY COULD BE HARMFUL?

Regardless of whether there may be harmful degrees of positive emotionality, a related aspect but with different implications is to ask whether there are specific populations, especially in the clinical field, in which an intervention to increase positive emotions may not be indicated.

Firstly, we know that the activation of positive emotions when they are produced by achieving a goal can increase the likelihood of suffering a manic episode (Johnson, 2005). Therefore, training that focuses the attention on the positive emotional aspects could speed up the process, especially if the training is done in the absence of other types of intervention that help the person to detect and take action when a mood begins to be dysregulated toward the positive. Therefore probably the clearest case in which extreme caution should be exercised with positive interventions, if they are not outright discouraged, is when a vulnerability to mania can be anticipated, either due to the family history or the presence of hypomanic episodes in the past, a phenomenon that could have gone unnoticed by the individual. A question for future research would be to analyze whether interventions that are more focused on variables of eudaimonic well-being (e.g., competence or life meaning) or that promote low arousal positive emotions might be more suitable for these patients.

A recent study may enable us to better understand the potential impact of a positive intervention. Hervás and Sánchez (2016) examined the effect on motivational level that an intervention to activate a positive mood could have in comparison with an intervention to activate a sad mood (and in comparison with a neutral intervention). The dependent variables were sensitivity to reward and to punishment, which are, in other words, indicators of the level of functioning of the base activation system (BAS) and behavioral inhibition system (BIS), respectively. Although the original theory of Gray (1987) has been refined in recent years (Gray & McNaughton, 2000), analyzing the sensitivity to reward and punishment is a simple and useful way to evaluate the basic motivational processes of an individual. In this case, the aim was not to assess the characteristic level of each individual (i.e., personality), but the temporal variations on the base line of each individual. Therefore, for this purpose a state measure was employed for assessing the two constructs (see



Hervás & Vázquez, 2013). The results of this study showed that the increase in negative affect reduced the sensitivity to reward, leaving the sensitivity to punishment unchanged; and most importantly, the increase in positive affect reduced the sensitivity to punishment, not changing the sensitivity to reward. In short, an intervention to increase positive emotionality may, consistent with previous research (Ford et al., 2010), partially deactivate the behavioral inhibition system and therefore the sensitivity to punishment.

The preliminary conclusion, regarding its suitability in certain clinical groups, is that a positive intervention could be very helpful for depression since the increase in positive affect could offset the decline previously produced by the anhedonia (i.e., chronic low sensitivity to reward) and, at the same time, it reduces sensitivity to punishment which, in the case of depressive patients, seems to be associated with a greater tendency towards rumination (e.g., Hervás & Vázquez, 2011). Furthermore, these results suggest that an intervention to increase the positive emotions also may be indicated for anxiety problems, since the sensitivity to punishment is a key element in activating the alarm system, and the inhibition traits in personality are associated with the development of anxiety disorders (e.g., Degnan & Fox, 2007).

In which cases might positive interventions not be indicated? Although, as we said, further research is needed, we should exercise caution in those cases in which a reduced sensitivity to punishment may aggravate a previous problem. For example, in certain conditions a sensitivity to punishment is usually found to be already reduced, and this reduction sometimes appears associated directly or indirectly with some of its most important symptoms.

Bearing in mind the review by Bijttebier, Beck, Claes, and Vandereycken (2010) on BIS/BAS patterns in different psychopathological conditions, we could anticipate that, aside from bipolar disorders, positive emotions could have potential adverse effects on people with impulsivity problems –who present a component of reduced sensitivity to punishment–, in people with attention deficit hyperactivity disorder (ADHD) and, lastly, in people with antisocial personality disorder.

Regarding the first point, detecting problems of impulsivity associated with profiles of high sensation seeking (e.g., Braddock et al., 2011) or substance abuse conditions (e.g., Franken & Muris, 2006) could be an important key to ruling out intervention focused on positive emotions. Caution should be exercised in those cases where these problems arise associated with a high level of positive urgency, a concept that refers to the tendency to activate impulsive behaviors in response to intense positive emotional states (Cyders et al., 2007). A similar phenomenon has been observed in certain profiles of eating disorders, where preliminary evidence has been collected to suggest that not only negative emotions, but also positive ones

could be activating dysregulated eating behaviors (e.g., Bongers, Jansen, Houben, & Roefs, 2013).

Due to its prevalence, the case of ADHD also deserves some additional comments. Recent studies agree that patients with this condition tend to show problems regulating, not only negative emotions, but also positive ones (Sjöwall, Roth, Lindqvist, & Thorell, 2013). This, coupled with the problems these patients have in inhibiting their behavior appropriately, which seems partly due to a reduced sensitivity to punishment (e.g., Quay, 1997), seems to discourage, a priori, an intervention based on positive emotions. In these cases, it might be more suitable to apply interventions based on the promotion of mindfulness, as these interventions can also stimulate positive emotions in the long term (e.g., Garland, Geschwind, Peeters, & Wichers, 2015), and there already exists positive evidence of their efficacy in this population (e.g., Schoenberg et al., 2014).

Finally, although the problems associated with an increase in positive emotionality in people with antisocial personality disorder are not easy to predict, what can be anticipated based on the available evidence is that the most vulnerable profile would be that referred to as primary psychopathy, due to its low level of sensitivity to punishment (Newman, MacCoon, Vaughn, & Sadeh, 2005). In this case, rather than implementing programs of positive emotions, in general, training in specific positive emotions –such as compassion– could be applied, which could have a more direct effect on the core of the disorder (see Holthouser & Bui, 2015).

From all of the review work carried out, we can draw two main conclusions: (a) positive interventions focused on the emotions should preferably focus on increasing the frequency of positive affect, rather than increasing its intensity, taking care to see that negative emotionality is not inhibited in parallel, and (b) it is important to remember that, although for most people and situations an increase in the frequency of positive emotions can bring significant benefits, there may be specific situations in which implementing a program of increased positive emotionality would not be indicated either because the context means it is not recommended (e.g., frequent threats or a very frequent need to activate cognitive analytical processing), or because certain elements of vulnerability present in the individual (mainly mania, hyperactivity and impulsiveness) could interact negatively with increased positive affect.

#### CAN PERSONAL STRENGTHS BECOME EXCESSIVE?

With regards to intervention on strengths, there are fewer studies available regarding the potential contraindications so it is not possible to formulate such specific recommendations. In any case, there are results available that may be of interest in achieving improved implementation of these interventions. For example, could it happen that a person who has a particular strength –such as courage or optimism– could, due to putting it



into practice more often, as discussed in some interventions, suffer some kind of adverse effect? Although, based on the data that we have, we cannot be sure that this can occur, the truth is that some strengths can be expressed in such high intensity that it might have negative implications for the individual or for other people. Whether or not these negative consequences occur will depend on factors such as context, and the presence of other personality traits that may modulate the impact of the strength.

Grant and Schwartz (2011) reviewed the available evidence on the extent to which having a positive trait to an extreme degree can become harmful. For example, optimism, self-control or generosity, when manifested excessively, can generate problems or disadvantages. For example, very high optimism appears to be associated in some studies to smoking more, to lower savings, or paying one's credit card late (e.g., Puri & Robinson, 2007); self-control, when it becomes too intense and rigid, has been associated with numerous clinical and other problems (e.g., Tangney et al., 2004). Generosity, when excessive, also called pathological altruism (e.g., Oakley, 2013), may be associated with problems for oneself (McGrath & Oakley, 2012) or, in some cases, for others who may receive help they did not ask for and/or which is damaging to them (e.g., Locke, Campbell, & Kavanagh, 2012).

These are some examples, but many others could be added that simply reaffirm the proposal of the middle way or the Aristotelian midpoint, which long ago anticipated a reality that can now be demonstrated with data: a virtue can be a problem when it is lacking in a person, but it can also be a problem when it is demonstrated in excess (Grant & Schwartz, 2011). Again, an inverted-U effect.

Considering these aspects when applying strengths-based interventions is therefore very relevant. It would be inadvisable to implement a strengths-based intervention indiscriminately without encouraging in participants a minimum analysis of the potential consequences, as well as an assessment of what is the point of balance for each of the contexts in which it is to be applied. Sometimes the point of balance depends on other complementary skills being cultivated, such as when a person with the strength of courage must develop specific social skills so that the behaviors associated with courage (e.g., denouncing an unfair situation) are implemented in an adaptive way. Although these considerations did not appear in the first formulations, the latest manualized programs of positive psychotherapy specifically anticipate the importance of working on the strengths maintaining this balanced perspective (e.g., Chaves et al, 2016; Rashid, 2015).

Apart from the question of balance, we must not forget that working with personal strengths involves implementing, sometimes after a long period of abandonment, emotional traits with very important implications. By definition, strengths are not typical positive traits, but rather they are perceived as intrinsic

traits, which implies an important connection with the identity and the motivational mechanisms of the individual (e.g., Sheldon & Elliot, 1999). Raising awareness of these roots and aligning one's individual goals with them within a coherent project is undoubtedly one of the great added values of working on strengths. But precisely because of that privileged connection, a negative experience in the application of a strength may have a damaging impact with equally profound implications for the identity and self-esteem. Although it is most common that when these "damaged or ambivalent strengths" manifest (a phenomenon yet to be studied), they are a consequence of the individual's life history, it is not ruled out that malpractice in the context of a positive intervention can also trigger them.

## CONCLUSIONS

The results presented in the previous sections, which highlight the potential adverse effects of certain positive interventions for certain people or at certain times, should not detract from the wealth of resources and interventions developed within the framework of positive psychology. Although it may be difficult to understand or accept for some academics and practitioners, positive interventions are a set of extremely innovative interventions with enormous potential to be combined with other interventions (e.g., Chaves et al., 2016).

This view is not incompatible with recognizing that positive interventions must be applied with great care because, like any other psychological intervention, they may have contraindications or adverse effects (Barlow, 2010). It could be interpreted that making suggestions on the indication or otherwise of certain positive interventions based primarily on indirect evidence, could be challenging the idea that "if it ain't broken, don't fix it". Should we wait to have specific data from the contraindications in order to establish these warnings? If there is indirect evidence to suggest that an intervention may cause harm, it would be best to take the most prudent option, even in people without mental health problems. In fact, carrying out interventions on people with an adequate level of mental health also involves a very high degree of responsibility that we must not ignore (Parks & Biswas-Diener, 2013). Naturally, this last thought should be applied not only to positive interventions but also to any psychological intervention performed in the healthy population.

Although positive interventions may seem simple to apply, the fact is that, in certain cases, they may require a high level of expertise by practitioners. The works reviewed in this article also show that a practitioner who is not capable of detecting traits of vulnerability to mania or impulsiveness may be far more likely to implement an iatrogenic intervention. Therefore, it would be pertinent to ask whether practitioners without prior training in psychology should apply these techniques while working with people who are (apparently) healthy. After this review, the



answer would probably be no. In fact, beyond the possibility of an iatrogenic intervention, there is a fact that is often forgotten: positive psychology, whether in its theories or its applications, becomes seriously distorted if it is isolated and situated outside the framework of the rest of psychology. For example, as pointed out above, the new findings on positive emotions must be integrated with what is already known about the adaptive role (or the maladaptive role, as the case may be) of negative emotions. This is something that any psychologist knows, but someone who has not received this basic training could miss it.

As reflected in this monograph, many scholars and practitioners consider that positive psychology is contributing – apart from the understandable misinterpretations, self-interested exaggerations or occasional mistakes – ingredients and advances of enormous importance both at the theoretical and applied levels. Especially in this area, and beyond the purely ethical aspects, we must remember the maxim of Aristotle's middle way, which in this context might suggest that in addition to continuing to work with the utmost enthusiasm, we always do so based on evenness and prudence.

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