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On the contribution of psychological flexibility to predict adjustment to breast cancer

Carmen Berrocal Montiel[1], Teresa Rivas Moya[2], Francesca Venditti[1] and Olivia Bernini[1]
[1] University of Pisa (Italy) and [2] University of Málaga

Abstract

Background: This study explored the contribution of Psychological Flexibility (PF) to predict adjustment to breast cancer. **Method:** Sixty-four females with breast cancer completed self-report measures of PF and adjustment (anxiety, depression, negative and positive affect) at baseline, and forty-two patients returned for assessment six months later. **Results:** Higher flexibility at baseline significantly contributed to predict lower anxiety, depression and negative affect at follow-up. The effect sizes ranged from moderate to large. **Conclusions:** Results provide evidence for targeting PF to prevent enhanced psychological distress in patients with breast cancer, and add to a growing body of research supporting PF as a common protective factor across different contexts and populations.

Keywords: Psychological flexibility, experiential avoidance, breast cancer, prediction, hierarchical regression.

Resumen

Contribución de la flexibilidad psicológica en la predicción del distrés psicológico en pacientes con cáncer de mama. **Antecedentes:** este estudio explora el grado de contribución de la Flexibilidad Psicológica (FP) en el pronóstico de diversos indicadores de adaptación al cáncer de mama. **Método:** 64 mujeres con cáncer de mama completaron medidas de FP, ansiedad, depresión, afecto negativo y positivo en un primer momento (T1), y 42 de ellas repitieron la evaluación seis meses después (T2). **Resultados:** los resultados indican que la FP en T1 contribuye significativamente en la predicción de ansiedad, depresión y afecto negativo en T2, con tamaños del efecto que oscilan entre moderado y grande. Elevados niveles de FP se asocian significativamente con niveles más bajos de distrés psicológico. **Conclusiones:** los resultados apoyan que la FP es un factor protector de niveles excesivos de distrés en pacientes con cáncer de mama. Estos resultados se suman al creciente cuerpo de evidencias que sugiere que la FP es un factor general de protección de la salud mental, transversal a diferentes contextos y poblaciones.

Palabras clave: flexibilidad psicológica, evitación experiencial, cáncer de mama, predicción, regresión jerárquica.

Around one-third of patients with breast cancer (BC) experiences high levels of psychological distress up to one year after diagnosis (e.g., Burgess et al., 2005), and a high percentage of them still reports severe anxiety (38.4%) or depression (22.2%) 18-months after BC pre-diagnosis (Vahdaninia, Omidvari, & Montazeri, 2010). Identifying and promoting protective factors for enhanced distress are main challenges in psycho-oncology, as distress can exacerbate illness and disability (Cohen, Janicie-Deverts, & Miller, 2007).

A growing body of evidence converges to support Psychological Flexibility (PF) as a protective factor in the exacerbation of psychological distress across different populations (see, for a review, Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Levin Hildebrandt, Lillis, & Hayes, 2012; Smout, Hayes, Atkin, Klausen, & Duguid, 2012). PF refers to the ability of being 'mindful of experiences in the present moment, in an accepting and non-judgmental way, while behaving consistently with one's values, even when one's thoughts and feelings oppose taking valued actions' (Levin, Pistorello, Seeley, & Hayes, 2014, p. 21).

Different processes negatively impact PF, including experiential avoidance (EA) (see, for a detailed description of PF processes, Hayes et al., 2006). EA is a process whereby an individual is unwilling to remain in contact with (often difficult/unpleasant) private experiences (e.g., thoughts, feelings, bodily sensations), and attempts to alter the form or frequency of these events and/or the contexts that cause them (Hayes et al., 2006). EA can paradoxically increase the intensity and frequency of those experiences that people try to suppress or avoid (Wenzlaff & Wegner, 2000), and facilitate patterns of action that are detached from one's values, which can in turn amplify negative private experiences (Hayes et al., 2006).

EA may be particularly harmful, and PF protective, when people encounter stressful periods throughout life (Biglan, Hayes, & Pistorello, 2008). This is the case for the first year following BC diagnosis, when women often have to cope with new, threatening or punishing situations (Burgess et al., 2005; Vahdaninia et al., 2010), which prompt difficult thoughts and feelings. In this

Received: October 16, 2015 • Accepted: March 11, 2016
Corresponding author: Carmen Berrocal Montiel,
University of Pisa
DIPINT, Via Savi, 10
56126 Pisa (Italy)
e-mail: carmen.berrocalmontiel@med.unipi.it

context, how patients *relate with* these private experiences, rather than *how difficult* they are, may affect adjustment to BC (Hayes et al., 2006).

Findings on PF/EA in the context of cancer are scarce but promising. Cross-sectional studies found that higher PF correlated with better adjustment in heterogeneous samples of patients with cancer (Ciarrochi, Fisher, & Lane, 2011) and in patients receiving palliative care (Low et al., 2012). Interventions aimed at increasing PF (and reducing EA) (i.e., Acceptance and Commitment Therapy; ACT) (Hayes et al., 2006) produce significant improvements in distress and quality of life in heterogeneous samples of patients with cancer (Feros, Lane, Ciarrochi, & Blackledge, 2013), BC (Mojtabaie & Asghari, 2014; Paez, Luciano, & Gutiérrez, 2007), and advanced-stage ovarian cancer (Rost, Wilson, Buchanan, Hildebrandt, & Mutch, 2012). Moreover, changes in adjustment proved to be significantly associated with changes in PF (Feros et al., 2013; Rost et al., 2012).

While previous research suggests that increases in PF are associated with lower distress, to the best of our knowledge, no study has yet explored whether PF is a temporal antecedent—and hence a potential protective factor—for a better adjustment over time in patients with BC. The identification of early and significant predictors of adjustment may provide an opportunity for the development of effective targeted programs to prevent (and not only to reduce) biopsychosocial burden of BC. The objective of this study is to explore the contribution of PF to prospectively predict adjustment in a sample of patients diagnosed with BC within the last 12 months.

Method

Participants

Participants were recruited from the Oncology and BC Centres of the Santa Chiara Hospital of Pisa (Italy). Eligible participants were adult women who had been diagnosed with BC within the last 12 months. Main variables in the study were measured at Time 1 (T1) and six months later (T2). Of the 70 women with BC who were approached, 64 patients (91%) agreed to participate and completed assessment at T1. One out of 70 patients declined to participate, and five patients consented but they did not complete one or more T1-measures. Most participants at T1 (70%, $n = 45$) had undergone surgery for BC. Patients receiving chemotherapy, radiation or hormonal therapy were, respectively: 55% (n = 35), 13% ($n = 8$), and 17% ($n = 11$). A total of 42 out of 64 patients (65%) completed all measures at T2.

Instruments

The 7-item version of the Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., 2011) was used to measure PF/EA. Items are rated on a 7-point Likert-type scale. Lower AAQ-II scores indicate lower EA (higher PF). The Italian version of the scale demonstrated good internal consistency, and adequate criterion and convergent validity in a general population sample (Pennato, Berrocal, Bernini, & Rivas, 2013).

The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) was used for assessing anxiety and depression separately. It consists of 14 items rated on a 4-point scale according to the manifestations of anxiety and depression reactions in the last week. Higher scores on the HADS indicate higher depression and anxiety. The HADS is a reliable and valid tool for assessing depression and anxiety states in clinical and community settings (Bjelland, Dahl, Haug, & Neckelmann, 2002).

The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used to measure negative and positive affect (NA and PA, respectively). NA and PA refer to aversive (e.g., fear, guilt, sadness, and anger) and positive (e.g., enthusiasm, confidence, and cheerfulness) emotional states, respectively. The PANAS consists of 20 items rated on a 5-point scale, with higher scores indicating higher PA and NA. The questionnaire proved adequate reliability, factorial and convergent validity in previous research (Crawford & Henry, 2004).

Background variables were extracted from the medical schedules and included socio-demographic (age, educational level, employment status, and whether they cohabitated or not with a partner) and clinical-related variables (number of months from BC diagnosis and cancer stage).

Procedure

The research protocol was approved by the local Ethical Committee. Research assistants visited medical centres for recruitment over a course of 18 months. Medical staff provided research assistants with a list containing consecutive attendees who were eligible to participate in the study. The patients were approached during their medical visits by the research assistants, who explained them the study and obtained informed consent. Participants completed the questionnaire package at T1, and they were invited to return six months later (T2) in order to complete the second wave of assessments. Participants who were unable to return were mailed the questionnaire package along with a stamped envelope to return it.

Data analysis

Data analysis was performed using the 16.0 version of the Statistical Package for Social Sciences. We conducted chi-square and t-Student for independent samples tests to explore whether patients who dropped out at T2 differed from completers on background variables as well as on adjustment at T1. Pearson's correlation coefficients for the relationships between background variables and adjustment at T2 were examined to identify potential confounders. Paired-samples t-tests were conducted to explore changes on adjustment across time. Four hierarchical multiple regression (HMR) models were then tested to explore the contribution of PF at T1 to predict each measure of adjustment at T2, controlling for adjustment at T1 as well as for potential background confounders.

Results

Sample characteristics

Table 1 shows the characteristics of the sample as well as the descriptive statistics for quantitative measures at T1. Participants who dropped out did not significantly differ from completers on background variables. Patients who dropped out reported lower PF and higher anxiety and NA mean scores than completers. Nevertheless, the results from Levene's tests supported the homogeneity of variances across the groups for all quantitative variables (Table 1).

Table 1
Socio-demographic and clinical characteristics for the sample and differences between completers and dropouts

	Sample at T1 (*N* = 64)	Completers (*N* = 42)	Dropouts (*N* = 22)	Between-groups differences	
				†χ^2 / (*t*)	*F*+
Age (M ± SD, range)	48.14 ± 9.36 23-68	47.62 ± 9.89 23-68	49.14 ± 8.36 34-65	(.61)	.62
Living with a partner (%)	69	64	77	1.13	–
Employed (%)	69	71	64	.41	–
Education level (%)				1.99	–
Primary/middle school	12	9	18		
Secondary school	58	60	55		
Bachelor/Master degree or higher	30	31	27		
Months from BC diagnosis (%)				1.49	–
≤ 6 months	47	52	36		
7-12 months	53	48	64		
Cancer Stage (%)^				1.78	–
I	34	29	45		
II	27	31	20		
III-IV	39	40	35		
M ± SD, range					
T1-AAQ-II	16.94 ± 7.31 7-37	15.48 ± 6.37 7-30	19.86 ± 8.31 8-37	(2.32*)	2.98
T1-Anxiety	5.62 ± 3.10 0-13	5.02 ± 2.99 0-13	6.77 ± 3.05 0-12	(2.21*)	.06
T1-Depression	3.08 ± 2.91 0-11	2.76 ± 2.70 0-11	3.68 ± 3.26 0-11	(1.20)	1.57
T1-Negative Affect	18.94 ± 6.27 10-31	17.66 ± 6.16 10-31	21.36 ± 5.88 11-30	(2.31*)	.02
T1-Positive Affect	27.37 ± 7.19 12-42	28.59 ± 7.46 12-42	25.05 ± 6.14 14-35	(-1.92)	.83

T1: Time 1; AAQ-II: Acceptance and Action Questionnaire-II;
† Chi-Square or t-Student test for categorical or quantitative variables, respectively
+ Levene's test
^ Chi-square for *N* = 62 subjects since cancer stage was unknown for *n* = 2 patients in the Dropout group; patients in the III and IV cancer stage were clustered since only 3 patients (all of them in the Completers group) were in the IV stage
* *p*<.05

Prediction of adjustment

Preliminary analyses. Most Pearson's correlation coefficients for the relations between background variables and adjustment at T2 were trivial (< .10) to low (< .30), and they did not reach statistical significance. Only 'living with a partner' and the number of months from BC diagnosis significantly correlated with adjustment at T2. Higher cancer duration was significantly associated with higher T2-anxiety (r = .36, p = .02), and 'living with a partner' was significantly related to higher depression (r = .35, p = .03) and lower PA at T2 (r = -.35, p = .02). Hence, these variables were retained in the regression models to predict the relative dependent measure at T2.

The data were then evaluated for violations of the HMR assumptions. No case showed absolute standardized residual values greater than 2, and all Cook's values were lower than 4/N, suggesting that no case had an unusual influence on the regression models. Table 2 shows Pearson's correlation coefficients for the relations between all variables included in the HMR models. All coefficients for the association between adjustment at T2 and both PF and adjustment at T1 were moderate to strong (ranging from -.43 to .73) and statistically significant. All measures of adjustment at T1 were positively correlated with the relative measure at T2. Higher PF at T1 correlated with lower anxiety, depression, and NA, and with higher PA at T2.

Most correlations between each pair of predictors to be included in each HMR model were low to moderate (ranging from .13 to .42). The only exceptions were the correlations between the AAQ-II and measures of anxiety (.61) and depression (.55) at T1. Overall, the predictors included in each model did not show a strong linear relation with one another, suggesting that a high degree of multicollinearity did not exist.

Kolmogorov-Smirnov tests showed that all dependent variables were normally distributed (Z = 1.11 for T2-anxiety; Z = 0.20 for T2-depression; Z = 0.61 for T2-NA; Z = 0.58 for T2-PA; p > .05 for all tests). Overall, the plots of the standardized residuals against the standardized predicted values for each outcome indicated that the assumption of homoscedasticity was not violated.

Alpha coefficients for outcomes at T2 were good (Table 2). The only exception was the coefficient for depression at T2, which was still acceptable (.63). Finally, anxiety, $t(41) = -2.82$, $p = .01$, depression, $t(41) = -2.03$, $p = .04$, NA, $t(41) = -2.30$, $p = .03$, and PA, $t(41) = 3.22$, $p = .01$, improved significantly across the follow-up.

Hierarchical Multiple Regression (HMR) models. A separate HMR analysis (Enter method) was conducted for each outcome at T2 (Table 3). Background variables significantly related to adjustment at T2 were entered into the first step of the equation. Adjustment at T1 and the AAQ-II were entered into the second and third step, respectively.

The first model tested the contribution of the AAQ-II to predict T2-anxiety, after controlling for the number of months from BC diagnosis and T1-anxiety. Cancer chronicity accounted for 13% of the variance in T2-anxiety ($p = .02$) (first step), and T1-anxiety explained an additional 20% ($p = .002$) of the variance (second step). The AAQ-II explained an additional 26% of the variation in T2-anxiety, over and above that accounted for cancer chronicity and T1-anxiety (third step). This increase was large (.51) (Cohen, 1988) and statistically significant ($p<.001$). Both lower cancer chronicity and higher PF at T1 were significant predictors of lower anxiety at T2.

In the second model, living with a partner and T1-depression accounted, respectively, for 12% ($p = .02$, first step) and 27% ($p<.001$, second step) of the variation in depression scores at T2. The AAQ-II accounted for a moderate additional percentage (9%) of the variance in the dependent variable ($p = .01$). Both lower depression and higher PF at T1 were significant predictors of lower depression scores at T2.

In the third model, T1-NA scores accounted for 25% of the variance in the relative measure at T2 ($p = .001$; first step). The AAQ-II accounted for an additional 18% of the variance ($p = .001$; second step), and this increase was moderate (.42). Both lower NA and higher PF at T1 were significant predictors of lower NA at T2.

In the fourth model, living with a partner accounted for 12% of the variability in T2-PA scores ($p = .02$; first step), and PA at T1 accounted for an additional 42% in the variance ($p<.001$; second step). The AAQ-II explained an additional 4% of the variance in the dependent variable, but this increase was small (.20) and did not reach the statistical significance. The only significant predictor of PA at T2 was PA at T1, with higher PA at baseline predicting higher PA at follow-up.

Discussion

The first main finding of this research is that PF reported by patients at baseline contributed significantly to predict adjustment six months later. In particular, the inclusion of the AAQ-II scores in the regression models significantly improved the prediction of three out of the four measures of adjustment at T2 (i.e., depression, anxiety, and NA). Higher levels of PF (lower AAQ-II scores) at baseline predicted lower anxiety, depression, and negative affect over time. These findings hold even after controlling for background variables as well as for adjustment at baseline, indicating that they were not due to carryover effects in adjustment scores. It is worth noting that the contribution of PF to explain lower anxiety was large, and it was moderate for depression and NA. Furthermore, PF was the strongest predictor in the equations predicting both anxiety and NA.

Taken together, our results add to a growing body of research supporting PF as a protective factor, and EA as a risk factor, in the development and exacerbation of psychological distress (Hayes et al., 2006; Levin et al., 2012; Smout et al., 2012). Our study extends these findings to patients with BC, hence supporting the conceptualization of PF as a common protective factor for mental health across different contexts and populations (Biglan et al., 2008). Patient's efforts to avoid uncomfortable private experiences (EA) can amplify psychological distress, both because those experiences become more salient and because they tend to narrow the range of behaviour that are possible since many behaviour might evoke feared private events (Hayes et al., 2006). On the contrary, the ability of being mindful of difficult experiences in the present moment, in an accepting and non-judgmental way, can protect patients for increased suffering over time (Hayes et al., 2006).

Table 2
Pearson's correlation coefficients, reliability and descriptive statistics for the variables in the HMR models ($N = 42$)

	Variables	1	2	3	4	5	6	7	8	9	10	11
1	Living with partner	–										
2	Months from diagnosis	.21	–									
3	T1-AAQ-II	.27	.13	–								
4	T1-Anxiety	.32*	.20	.61***	–							
5	T1-Depression	.42**	.25	.55***	.69***	–						
6	T1-NA	.20	.04	.38*	.60***	.46**	–					
7	T1-PA	-.37*	-.24	-.31*	-.41**	-.68***	-.51**	–				
8	T2-Anxiety	.22	.36*	.72***	.51**	.41**	.31*	-.23	–			
9	T2-Depression	.35*	.28	.60***	.44**	.61***	.40**	-.49**	.58***	–		
10	T2-NA	.22	.23	.58***	.39*	.34*	.50**	-.27	.78***	.62***	–	
11	T2-PA	-.35*	-.10	-.43**	-.30	-.56***	-.49**	.73***	-.42**	-.65***	-.54***	–
	Cronbach's Alpha	–	–	.81	.73	.73	.89	.88	.81	.63	.85	.89
	M	–	–	15.48	5.02	2.76	17.66	28.59	3.7	2.1	15.6	31.3
	SD	–	–	6.37	2.99	2.70	6.16	7.46	3.1	2.2	6.2	7.2
	Range	–	–	7-30	0-13	0-11	10-31	12-42	0-11	0-7	10-30	12-45

T1: Time 1; T2: Time 2; AAQ-II: Acceptance and Action Questionnaire-II; NA: Negative Affect; PA: Positive Affect
* $p<.05$, ** $p<.01$, *** $p<.001$

Table 3
HMR models (Enter method) to predict adjustment at T2 (N = 42)

Dependent Variable (T2)	Predictors	B	β	*t*	R^2	*F*	*F Change*
Anxiety	**Step 1**				.13	5.84*	
	Months from diagnosis†	2.17	.36	2.42*			
	Step 2				.33	9.40***	11.45**
	Months from diagnosis	1.61	.26	1.98*			
	T1-Anxiety	.47	.45	3.38**			
	Step 3				.59	17.85***	23.76***
	Months from diagnosis	1.58	.26	2.43*			
	T1-Anxiety	.06	.06	.45			
	T1-AAQ-II	.31	.64	4.87***			
Depression	**Step 1**				.12	5.44*	
	Living with partner+	1.56	.35	2.33*			
	Step 2				.39	12.21***	16.82***
	Living with partner	.49	.11	.79			
	T1-Depression	.46	.57	4.10***			
	Step 3				.48	11.66***	6.89*
	Living with partner	.41	.09	.71			
	T1-Depression	.30	.37	2.51*			
	T1-AAQ-II	.13	.37	2.63*			
NA	**Step 1**				.25	13.11**	
	T1-NA	.43	.49	3.62**			
	Step 2				.43	14.39***	12.06**
	T1-NA	.28	.32	2.47*			
	T1-AAQ-II	.38	.46	3.47***			
PA	**Step 1**				.12	5.54*	
	Living with partner+	-5.19	-.35	-2.35*			
	Step 2				.54	23.24***	36.07***
	Living with partner	-1.33	-.09	-.77			
	T1-PA	.67	.70	6.01***			
	Step 3				.58	17.69***	3.55
	Living with partner	-.77	-.05	-.45			
	T1-PA	.63	.65	5.58***			
	T1-AAQ-II	-.24	-.21	-1.88			

T1: Time 1; T2: Time 2; AAQ-II: Acceptance and Action Questionnaire-II; NA: Negative Affect; PA: Positive Affect
†Dummy coded variable: 0: ≤ 6 months from BC diagnosis at T1; 1: 7-to-12 months from BC diagnosis at T1.
+Dummy coded variable: 0: not living with a partner; 1: living with a partner.
* $p<.05$, ** $p<.01$, *** $p<.001$

Our study also extends previous findings on the psychometric properties of the Italian version of the AAQ-II, indicating that it is a useful tool for predicting adjustment across time. It may be used to identify patients with low PF at an early stage, and to provide them with interventions that successfully target PF, such as ACT-based interventions (Feros et al., 2013; Rost et al., 2012). Rather than helping people to change difficult private experiences, ACT focuses on the development of abilities to accept such experiences without being dominated by them, to clarify what people value in life, and to engage in valued-consistent actions (Hayes et al., 2006). An important area for future research can be to explore the effectiveness of ACT to prevent (and not only to reduce) excessive distress and behavioural ineffectiveness in the context of cancer.

On the other hand, it should be noted that PF failed to significantly explain any additional variance in PA scores at T2, above and beyond that already explained by PA at T1. This finding may be due to the limitations of using a prospective study design where the dependent variable at baseline may consume much of the residual variance left to be explained by other predictors. Indeed, PA scores at T1 explained a high percentage of the variance (42%) in PA at T2.

The results concerning the relationships between background variables and adjustment are potentially interesting too. First, consistent with most findings from cross-sectional and longitudinal studies, cancer stage was not significantly associated with adjustment in this study (e.g., Burgess et al., 2005). Second, average levels of anxiety, depression and NA diminished significantly, and PA increased significantly from T1 to T2 in this study. These results are consistent with findings in the field showing that psychological distress improves significantly across the year after BC diagnosis (Burgess et al., 2005; Stanton, Danoff-Burg, & Huggins, 2002; Vahdaninia et al., 2010).

Most interestingly, although the overall level of adjustment improved from T1 to T2, our results suggest that average levels of anxiety may still increase after the first year following the diagnosis. Those patients who had been diagnosed with BC from 13 to 18 months before the T2-assessment reported higher anxiety than patients who had been diagnosed with BC from 6 to 12 months before. Higher levels of anxiety in the former group may be related to specific challenges and difficulties arising at the survivor phase, such as fear of recurrence and pain interference. Indeed, fear of recurrence often emerges as one of the patient's main concerns after the primary treatment for BC, and it does not change significantly across time (e.g., Stanton et al., 2002). Pain interference also appears associated with anxiety at 18 months after BC pre-treatment (e.g., Vahdaninia et al., 2010). It is also reasonable to hypothesize that EA could impact both outcomes. Previous related work showed that avoidance coping—a construct closely related to EA— at BC diagnosis predicted higher fear of recurrence one year later (Stanton et al., 2002), and a broad body of research evidenced that higher EA is associated to higher pain interference (Veehof, Oskam, Schreurs, & Bohlmeijeret, 2011).

Different concerns remain on the generalizability of our findings. In particular, the sample in this study was limited to women with BC in the first year after diagnosis. Further studies are needed to explore the generalizability of our findings to patients in other BC phases, as well as to test whether these HRM results do replicate. Moreover, the focus on the first year after BC diagnosis as well as dropouts at T2 limited the sample size of this study, which can reduce the power and the effect size of the tests. Despite these limitations, it is worth noting that the results supported the homogeneity of the variances across completers and dropouts for all measures and that the data satisfied all the assumptions of multiple regression analyses, which support the trustworthiness of our results.

An additional limitation of this study is the threat of common method variance. Future research is needed to explore the contribution of PF when other tools for assessing adjustment are

considered. Furthermore, the dependent variables in this study deserve some additional comments. All measures of adjustment in this study were limited to emotional functioning, while no index of behavioural engagement and effectiveness was included. This might seem inconsistent with the PF model, as it is a model of how to take valued actions with whatever one feels, rather than a model of how to feel good or bad. Nevertheless, while PF focuses on qualities of behaviour and behavioural engagement, a by-product of effective behaviour is relative emotional well-being. In other words, when we are more effective, we are not free from anxiety or sadness but, at the same time, effective living is expected to confer people a certain degree of healthy emotional functioning.

Even though one of the strengths of this study is the longitudinal design, which allowed us to control for adjustment at baseline, experimental and other research designs are needed in order to rigorously establish causal links between PF and adjustment. Nevertheless, the consistency of our results with experimental research on PF in different contexts is reassuring (Levin et al., 2012). Without underestimating the above-mentioned limitations, the identification of PF as a potential protective factor for distress in BC is a promising finding to strengthen preventive approaches in the context of cancer.

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