Side Effect Perceptions and their Impact on Treatment Decisions in Women

Supplemental Material

Principal Component Analysis with Z-Standardized Side-Effect Ratings

We also examined the structure of respondents' cognitive representations of the side effects when ratings were z-standardized on each scale within respondents, thus reducing individual differences in using the scales. Based on the average rating (across participants) for each side effect on each characteristic, we then used the principal() function of the psych package in R to conduct a principal component analysis (PCA) on the average ratings (with an oblique rotation). Bartlett's test of sphericity indicated that the correlations between the items were sufficiently large for conducting a PCA, $\chi^2(105) = 324.9$, $p < .001$. The scree plot suggested a four-component solution, which explained 87% of the total variance (see Supplemental Table 1). The individual components accounted for 33%, 24%, 19%, and 10% of the variance, respectively. The individual components were only slightly correlated, with the highest intercorrelation between the first and the second component ($r = .24$); the intercorrelations between the other components ranged between $r = -.03$ to .16.

Supplemental Table 2 shows the results of the four regression analyses conducted on the components derived from the z-standardized ratings. Across all four measures of aversiveness, the side effect's score on the affective challenge component was consistently linked to aversiveness. However, there were also differences between the different measures of aversiveness. For instance, whereas affective challenge was the only significant predictor of choice, components 3 and 4 were also predictive for negative affective attitude and undesirability rank. As in the original analyses, the social challenge component predicted none of the aversiveness measures, and only affective challenge was relevant for predicting aversion.

Supplemental Table 1. *Component loadings from the principle component analysis (oblique rotation) of the z-standardized average (across participants) side effect characteristics as obtained in the side effect perception task.*

Characteristic	Component [a]				Communality
	Affective challenge	Social challenge	3	4	
Sad	**0.96**				0.95
Angry	**0.95**				0.96
Frightening	**0.88**	-0.33			0.89
Delayed	**0.79**				0.88
Dread	**0.68**	0.39			0.95
Chronic	**0.65**	0.30	0.45		0.89
Disabling	***0.57***	-0.47	0.44	0.35	0.90
Embarrassing		**0.89**			0.89
Gross		**0.88**			0.80
Visible		**0.74**			0.81
Disfiguring	0.30	**0.74**			0.77
Treatable			***0.94***		0.85
Painful			**0.89**		0.86
Common			0.58	***-0.77***	0.83
Symptomatic			0.33	***0.72***	0.80

[a] Loadings < .30 not shown. Bolded text denotes characteristics that were included in the component. Italicized text indicates loadings that were different from the analyses described in the results section of the manuscript.

Supplemental Table 2. *Regression analyses predicting side effect aversiveness from the component scores underlying side effect representations, using component scores derived from the z-standardized measures*

Predictor	Aversiveness Measure[a]			
	Choice	Negative Affective Attitude	WTP	Undesirability Rank
Intercept	3.33 [3.26, 3.39]	64.96 [63.05, 66.87]	50.32 [46.44, 54.19]	5.45 [5.13, 5.77]
Affective challenge	**-0.08 [-1.48, -0.02]**	**9.84 [7.78, 11.91]**	**10.51 [6.31, 14.71]**	**-1.23 [-1.58, -0.89]**
Social challenge	-0.00 [-0.07, 0.06]	-0.49 [-2.52, 1.54]	0.60 [-3.51, 4.72]	0.26 [-0.07, 0.60]
Component 3	-0.01 [-0.07, -0.06]	**2.74 [0.74, 4.74]**	1.66 [-2.40, 5.72]	**-0.52 [-0.85, -0.18]**
Component 4	0.00 [-0.07, 0.06]	**2.56 [0.56, 4.55]**	**5.02 [0.97, 9.07]**	**-0.46 [-0.79, -0.13]**
	R^2 = .35	R^2 = .91	R^2 = .76	R^2 = .87

[a] Shown are the regressions for the four measures of aversiveness separately. The 95% confidence intervals for the beta coefficients are in brackets. Predictors that are statistically significant at $p < .05$ are bolded.