

Association Between Positivity, Happiness and Smoking Cessation

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In Italy 22% of the entire adult population (11.3 million of people) are current smokers (OssFAD, 2014). Likely, people derive some sort of gratification from smoking, and often believe that quitting would mean to give up an important source of enjoyment and Happiness (HAP) (Shabab & West, 2012). Since HAP states have been associated with reductions in intermediary correlates such as neuroendocrine or inflammatory markers (Steptoe et al., 2005) which are strong correlates of smoking (Shabab & West, 2009), it has been hypothesized that the impact of smoking cessation on the subsequent health of *ex-smokers* also may be influenced by changes in HAP levels. Recent studies point to "Positivity" (POS) as a major dispositional determinant of HAP (Caprara et al., 2015). POS is basic a personality trait conducive to facing experience under a positive outlook, staying at the core of self-esteem, life satisfaction and optimism. Given that in a previous study POS was significantly and negatively associated with smoking status and craving to smoke (Grassi et al., 2014), in the present study we examine the extent to which POS accounts for the degree of HAP reported by *ex-smokers* and *relapsers*.

481 subjects (55.7±9.9 yrs) who had carried out in the period from 2005 to 2010 a 6-week Group Counselling Program (GCP) for smoking cessation, were contacted through a telephone call: 244 (51%) resulted to be *ex-smokers* (52% female), while 237 (49%) were *still-smokers* (67% female). *Ex-smokers* were asked about the feeling of their HAP (Shabab & West, 2009). The same questions were addressed to the *relapsers* (*non-smokers* at 1-yr follow-up after the GCP, who started smoking again later), to compare their self-reported HAP with when they were *non-smokers*. *Ex-smokers* were asked about the pleasure they derived from smoking. The same questions were addressed to *still-smokers* (*smokers* at 1-yr follow up and *still-smokers*) (Table 1).

The present findings are consistent with literature assigning to POS a crucial role in sustaining individuals efforts to espouse healthier lifestyles, remaining happier than less positive individuals. In accordance with our hypothesis, levels of POS positively predicted smoking status, with more positive individuals more likely to be in the *ex-smokers* conditions. This result is of interest, since it underlines the potential represented by positive personality traits. Such potentials may be fruitfully suited in applied interventions, since they represent resources available to individuals to invest in effortful attempt to quit unhealthy lifestyles (such as smoking). Of relevance our findings suggest that POS not only predicts smoking status, but also reduces the craving to smoke. Indeed, positive *ex-smokers* were characterized also by a lower desire to revert to the past negative habit.

Thus, it seems the association between POS and HAP is another important insight from this study. Taken together, present results suggest that by increasing the subjective feeling of HAP, POS decreases the likelihood of recidivism due to the experience of negative affect after smoking.

Table 1. HAP, Smoking Enjoyment and POS after a GCP for smoking cessation

	Ex-smokers (n=244)	Still-smokers (n=237)
Self-reported HAP:		
		Relapsers (n=54)
	'How do you feel now compared with when you were a smoker?'	'How do you feel now compared with when you were a non-smoker?'
Happier	88.1	18.5
The same	5.3	13.0
Less happy	4.5	64.8
I don't know	2.1	3.7
Self-reported Smoking Enjoyment:		
	'How much pleasure you derived from smoking?'	'How much pleasure you derive actually from smoking?'
Very much	34.4	6.7
Quite a bit	50.8	10.6

Non particularly	10.1	40.8
Not at all	3.4	32.4
I don't know	1.3	9.5
POS**	3.8±0.7	3.6±0.8

Data are reported as percentage or as mean±SD. ** P< 0.05

Caprara et al. (2015). Submitted;Grassi et al. (2014). *Biomed Res Int.* 780146;Shabab & West (2012). *Drug Alcohol Depend.* 121, 38-44;Shabab & West (2009). *Nicotine Tob Res.* 11, 553-7;Steptoe et al. (2005). *Proc Natl Acad Sci USA.* 102, 6508-12.