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HEALTHY THOUGHTS ABOUT UNHEALTHY BEHAVIOUR

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Schwarzer (1993) describes a theoretical framework of health-related cognitions and presents an analysis of the role of perceived vulnerability and positive expectancies in behavioural change processes. He argues that positive expectancies such as optimism about one's vulnerability play a key role in many different approaches in the area of health psychology. Unfortunately, definitions of optimism and measurement techniques used to assess optimism vary widely. One of the aims of Schwarzer's article is to distinguish the many definitions and concepts used in the literature. The first part of his article focuses on optimism and distinguishes *defensive* optimism from *functional* optimism. The former refers to a defensive strategy which could reduce the likelihood that people take precautions ("the risks apply more to others than to oneself"). Functional optimism, on the other hand, refers to positive expectancies that can enhance general health and/or health behaviour. In this context, Schwarzer also reminds us of the necessity to differentiate between optimistic explanatory style (Seligman, 1991) and dispositional optimism (Scheier and Carver, 1992). In the final sections Schwarzer focuses on optimism in terms of self-efficacy expectancies.

All in all Schwarzer's article serves as a timely reminder of the need to carefully *define* and *measure* positive expectancies. The increased use in the literature of terms such as optimism, unrealistic optimism, functional optimism, and positive illusions is sometimes accompanied by conceptual confusion. Similar remarks can be made about the use of self-efficacy. In this reaction to Schwarzer's insightful and useful analysis I would like to address two issues. The first concerns the measurement of vulnerability. The second issue concerns the relation between risk perceptions, defensive optimism and behaviour.

THE MEASUREMENT OF VULNERABILITY

Schwarzer rightly points at the necessity to pay more attention to the assessment of risk or vulnerability. For instance people find it especially difficult to make

numerical estimates of chance or likelihood. Although Schwarzer suggests that people underestimate their actual risk, this needs further qualification especially if the researcher requires subjects to give *numerical* estimates of chance or likelihood. In absolute terms people tend to overestimate small probabilities and underestimate large probabilities. Thus their risk assessments can be higher than "objective" risks based on epidemiological findings. This would constitute pessimism. Notwithstanding this possible overestimation, there is still the robust finding that this overestimation tends to be less for oneself as compared to others. Thus, optimism is also found when respondents are pessimistic in terms of their assessment of actual risk. Again, the latter is mainly due to difficulties people have when giving numerical risk estimates. A more important point concerns Schwarzer's distinction between *two* kinds of conditional risk assessments. Generally, the literature is very inconsistent on this issue. Some researchers use *unconditional* risk estimates, others use conditional risk estimates ("what would be your risk if you (do not) change your behaviour?"). Schwarzer prefers assessment in terms of the latter two *conditional* measures and suggests to use the difference score as a measure of vulnerability. I would prefer to focus on one conditional risk estimate (usually the estimate associated with the recommended behaviour) due to the statistical disadvantages of working with difference scores. Another solution would be to use a direct comparative measure and ask respondents to indicate how much less their risk would be if precautions were taken. In this way, perceived vulnerability will be more or less equivalent to the variable "response efficacy", and one could wonder whether we really need the concept of perceived risk in social cognition models of health behaviour. To that issue we turn next.

DEFENSIVE OPTIMISM AND BEHAVIOUR

Schwarzer repeats the frequently made point that increased optimism could hinder the development and/or maintenance of preventive health behaviour. This statement is often made in the literature. Some cautionary notes seem in order, however. There is some evidence showing that perceptions of vulnerability predict preventive health behaviour (Becker, Haefner, Kasl, Kirscht, Maiman & Rosenstock, 1977; Cummings, Jette, Brock & Haefner, 1979). There is less evidence, however, for the proposed relationships between unrealistic optimism, perceived vulnerability and behaviour. Some studies (e.g. Lee, 1989) found a direct link between risk appraisals and smoking. Research on high-risk groups presents a different picture. Joseph *et al.* (1987) presented a longitudinal analyses exploring the perception of AIDS-risks and behavioural, social and psychological consequences. Although univariate analyses showed that perceived risk was related to subsequent behavioural risk reduction, these effects disappeared after adjustment for sociodemographic variables, initial behaviour, and other factors such as knowledge about AIDS, perceived self-efficacy, barriers to behavioural change and social norms. Overall, their findings did not show any adverse behavioural consequences of optimism. On the contrary, those who were pessimistic and perceived themselves to be at greater risk

were more prone to a range of potentially adverse consequences such as relatively extreme anxiety about AIDS, increased barriers to behavioural change and social role impairment. These findings suggest that there is little or no observable benefit to an increased sense of risk for *existing at-risk populations*. Bauman and Siegel's (1987) findings show the opposite and suggest that people at risk, who employ defensive denial as a coping strategy and are optimistic about their vulnerability, tend to engage in more risky sexual practices and focus on irrelevant precautions to enhance their feeling of safety. Both Joseph *et al.* and Bauman and Siegel dealt with at-risk samples and provide only a partial answer concerning the relationship between optimism, perceived vulnerability, behavioural intentions and future behaviour. Generally, research shows the expected relation between optimism and behavioural intentions to engage in preventive behaviour. Unilateral analyses generally confirm the predicted effects of optimism on behavioural intentions. However, when the role of perceived risk is tested in the context of other cognitive variables such as self-efficacy, demographic variables, social norms, and existing behavioural practices, its effect on behaviour seems negligible (Otten and van der Pligt, 1992).

Defensive optimism has been found for a wide variety of health-related events. The exact causal role of this factor is, however, not well established and requires further empirical documentation. Up to now the evidence tends to be sparse and is largely correlational (van der Pligt, Otten, Richard and van der Velde, 1993). The predictive power of risk appraisal seems rather limited, as compared to other behavioural determinants. It could well be that perceived vulnerability functions as a threshold variable, which needs to surpass a certain value before people consider behavioural change. As soon as this process is set in motion, perceived vulnerability and especially optimistic biases could well play a marginal role in determining health behaviour. We have learned quite a bit about the causes of optimism. It seems essential that more effort is spent on understanding the *behavioural consequences* of optimistic biases.

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