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Health Promoting Opportunities in Urban Environment

Jan Vinck
Health Psychology Research Group
Instituut voor Gedragswetenschappen
Universiteit Hasselt / Campus Diepenbeek, Belgium
e-mail: jan.vinck@uhasselt.be

Abstract. This paper is attempted to answer to the question "How can psychologists, using psychological science, contribute to the prevention of illness and to the promotion of health, particularly in an urban environment?" It will be shown that in this ecological approach the urban environment is of crucial importance, which opens health promoting opportunities. Media advertise for specific products and have an influence on sale; they create social models, social norms and stereotypes. Social and cultural forces have an impact on stereotypes with regards to healthy and risky behaviour. The educational system has, in collaboration with parents, an important role in shaping healthy behaviour and establishing healthy social norms. We draw a conclusion that we should stop focusing (almost exclusively) on individual responsibility and rationality, understand health related behaviour as habits and move to working with the situational contingencies that are eliciting and reinforcing behaviour.

Keywords: health psychology, health promotion, urban environment.

Abstrak. Artikel ini berupaya menjawab pertanyaan "Bagaimana para psikolog, dengan ilmunya, mampu berkontribusi pada pencegahan penyakit dan promosi kesehatan, terutama dalam lingkungan perkotaan?" Akan ditunjukkan bahwa dalam pendekatan ekologis ini, lingkungan perkotaan amat menentukan, yang memberi kesempatan mempromosikan kesehatan. Media mengiklankan produk-produk spesifik dan memengaruhi penjualan; mereka menciptakan model sosial, norma dan stereotip sosial. Kekuatan sosial dan budaya memiliki dampak pada stereotip yang menyangkut perilaku sehat maupun berisiko. Sistem pendidikan memiliki, dalam kerja sama dengan para orang tua, peran penting dalam membentuk perilaku sehat dan mengukuhkan norma sosial yang sehat. Kami menarik simpulan bahwa kami harus mampu berhenti menuntut (nyaris secara eksklusif) tanggung jawab dan rasionalitas individual, memahami bahwa perilaku terkait kesehatan adalah suatu kebiasaan dan mulai bekerja dengan kemungkinan situasional yang mencetuskan dan menguatkan perilaku.

Kata kunci: psikologi kesehatan, promosi kesehatan, lingkungan perkotaan

Health psychology examines the relations between health and behaviour, and the related possibilities to act accordingly. Recent developments in health psychology show (1) that it is not realistic to efficiently combat important health problems targeting individual behaviour and individual responsibility and that it is necessary to intervene at a population level and (2) that the traditional "health education" approach to prevention/health promotion yields sub-optimal effects partly because it is based on dubious theoretical assumptions about behaviour. The most interesting alternative approach is the comprehensive ecological approach. It will be shown that in this ecological approach the urban environment is of crucial importance, which opens health promoting opportunities.

Health and Behaviour

If psychology claims to have the potential of contributing to the health of people, that claim is based on the fact that health is related to, and is, to a certain extend, dependent on behaviour. Health psychology is the discipline that examines this relation between health and behaviour since the 1980's (Matarazzo, 1982). As this is a sub-discipline of psychology, it is crucial that the behavioural mechanisms that are related to physical health or

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physical functioning are firmly anchored in psychological science.We see three well-known psychological mechanisms whose impact onphysical functioning is well established (Vinck, 1983)

Conditioning

It is quite evident that the classic studies by Pavlov demonstrated that a well-defined psychological mechanism, classical conditioning, had a direct effect on an autonomous physical function, i.e. salivation. Since that time it has been shown in numerous studies that when an organism expects a stimulus (UCS), it learns to react to another stimulus that is reliably associated with the UCS (CS) as if the UCS were present. Autonomous physical (and emotional – but that is not what we are interested in here) reactions are easily elicited (Razran, 1961). Interesting examples are the effect of conditioning on the tolerance of drugs (Tiffany, Petrie, Baker, & Dahl, 1983), on nausea as a result of chemotherapy (Boudreaux, 1995) and on immunological activity (Ader & Cohen, 1993).

Instrumental conditioning has been claimed to have the potential of directly changing physical responses (Miller, 1969; Dworkin, 1985). While replications of such "visceral learning" experiments have proved to be difficult, instrumental conditioning is clearly explaining a number of health related behaviours, like "nervous cough" (Munford & Liberman, 1978) and chronic pain behaviour (Linton, 2000).

Emotions

Emotional reactions normally are to be seen as integrated biobehavioural responses, involving biological changes (Steptoe, 1991). This implies that it is possible that strong, or long-lasting emotional reactions can also be the cause of physical illness. Numerous studies have confirmed this hypothesis in cardiovascular diseases (CVD) (Steptoe, Fieldman, Evans, & Perry, 1996; Theorell, Tsutsumi, Hallquist, Reuterwall, Hogstedt, Fredlund, Emlund, Johnson, & The Stockholm Heart Epidemiology Program (SHEEP), 1998), stomach ulcers (Weiss, 1977), immunological responses (Kiecolt-Glaser, McGuire, Robles, & Gloser, 2002), cancer (Kiecolt-Glaser, Robles, Heffner, Lovng, & Glasser, 2002) and hyperventilation (Han, Stegen, De Valck, & Van de Woestijne, 1996). If this is the case, changing this emotional variable can be beneficial for patients suffering from complaints that are related to such emotions. Supporting coping strategies, e.g. relaxation techniques have been shown to have beneficial health effects (Öst, 1988; Stetter & Kupper, 2002; Krohne, 2003). Recently it has been shown that positive emotions have positive effects on physical functioning and physical health as well. It was found, e.g. that optimists have less physical complaints and enjoy better health than pessimists (Maruta, Colligan, Malinchoc, & Offord, 2000; Taylor, Kemmeny, Bower, Gruenwald, & Reed, 2000).

Habits or "Life Style"

It is long known that a number of life style aspects are related to health. Essentially it can be understood that a number of biological needs are dependent upon behaviour in order to be satisfied (Vinck, 1983). Nutrition is one of the evident examples here: malnutrition, and recently especially over-nutrition is related to CVD, some forms of cancer, obesity, diabetes (WHO/FAO, 2002). In the last decades obesity is universally recognised as a growing problem (Lobstein, Baur, & Vavy. 2004). This is also the case in Indonesia, where not only problems of under-nutrition, as a consequence of poverty, are a matter of concern, but also problems of obesity are rising significantly (Atmarita, 2005). Smoking is a second case in point; also here it is obvious that smoking is a cause of CVD and lung cancer (McGinnis & Foege, 1993). While this is well-known, large proportions of populations go on smoking regularly. Unfortunately, Indonesia is not an exception: 40.7% of adult males and 15% of boys are reported to smoke (Smet, Maes, De Clerq, Haryanti, & Winarno, 1999; Atmarita, 2005). Furthermore, maint!aining a healthy balance bet-ween, on the one hand being physically active and sleep and relaxation on the other hand is essential for health and well-being. Stress and cardio-vascular problems follow from an imbalance between both, as well when people experience emotional stress, as

when they live sedentary lives. In Indonesia, especially in urban adult populations, a majority of about 80% fails to take regular physical exercise, and deaths as a consequence of CVD have risen from 9.1% in 1986 to 26.3% in 2001(Atmarita).

Other forms of life style that are related to health, and that are relevant to Indonesia are hygiene, sexual behaviour, behaviour related to safe motherhood, and traffic safety. Related to hygiene are well-known problems of tuberculosis and diarrhoea. HIV/aids is of growing concern, with an estimated 170.000 HIV-infected people and is related to unprotected sexual behaviour and unsafe use of needles for drug injection; with a maternal mortality of 10.000 in 2002 Indonesia ranks among the countries where this problem remains really serious (Utami, 2007). The same holds for the 9.954 deaths in traffic accidents in 1999.

The conclusion is that, as elsewhere, many habits are threatening the health of the Indonesian population. And efforts to modify these habits have not been sufficiently successful (see e.g. Utami, 2007). As we will see in the next paragraph, the tendency to understand these behaviours as regulated by knowledge and by primarily cognitive factors, instead of seeing them as habits, has led to the tradition of trying to change them using health education strategies, which have proved to be less than optimally successful (Vinck & Chesney, 1996).

How to Promote Healthy Behavior in Populations?

So, if health is related to behaviour, it is obvious that psychology has a role to play. This challenge is taken up by health psychology (e.g. Sarafino, 2002).

Level of Intervention

Efforts of health psychology to help people are situated at two levels. On the one hand one can try to treat patients suffering from illnesses that are causally related to emotional (for example learn people to relax for tension headache) or life style factors (help obese people to change their diet). In the same vein, one can try to change individual health compromising behaviour, e.g. smoking cessation. Psychological interventions can also be helpful in the treatment of illnesses that are not causally related to psychological factors: Help patients to cope with anxiety for surgery, or promote compliance with treatment advice. These forms of what is usually called "clinical" health psychology–see Johnston and Johnston for a comprehensive overview of this domain (Johnston & Johnston, 2001) – is usually directed at individual patients or health care systems.

While these efforts of clinical health psychology are, of course, very important and contribute to health and well-being, there are several reasons to give at least as much attention to prevention and health promotion at a population level. Some of these reasons are (a) that targeting the individual involves the risk of "blaming the victim," for example "If you don't stop smoking it's your fault that you will be ill and you will be responsible"; (b) that it is absolutely impossible to imagine that individual treatment can offer a satisfactory solution for the many health problems of the population, imagine the treatment of smoking: If 40% of males smoke, and if a full-time therapist can treat say 200 patients a year with a 25% success rate, how many thousands of therapists would smoking cessation require? Add obesity, hypertension, headache, sleep problems, chronic back pain,…and we will need more therapists than the number of inhabitants in the entire country; (c) that waiting for a problem to develop and than treat it involves a lot of suffering and a slim chance that the patient will return to a completely healthy state.

So, if we agree that prevention and health promotion at a population level should receive at least the same amount of attention and effort as clinical health psychology, we may wonder why therapists in general, and psychologists are no exception in this respect, tend to prefer clinical work to prevention and health promotion. I'm convinced that this is primarily because clinical work is usually much more rewarding than work in prevention. For example, clinical work is financially more interesting, certainly in private practice; also the appeal from a suffering patient is much more compelling than the appeal of a percentage in a graph, and the emotional reward from a cured patient is greater than the satisfaction when the population-rate of HIV-positive people is reduced say by 0.5%. If, for that matter, a

specific person is not obese, is that thanks to your prevention program or because that person would not have become obese anyway?

So we see that it will require much wisdom from psychologists to engage in prevention/health promotion in stead of engaging in clinical work. This is all the more the case because, up to now, prevention efforts have not been as successful as one should wish them to be. Despite our efforts obesity keeps rising, smoking is still predominant and maternal mortality remains high, to give only a few examples. In the next two paragraphs, I will first try to understand the relatively poor success of the traditional prevention approach and, then, to show that an alternative approach is more promising while it takes into account the habit-character of most health related habits. In doing so it will become apparent that the environment, and certainly the urban environment, is a crucial variable in this latter approach.

The Traditional/Rational Approach

As has been said earlier, the traditional approach in prevention and health promotion is the "health education" approach. This approach is based on the assumption that human behaviour is largely rational: It is assumed that, if a person knows the risks of one type of behaviour, and knows how this risk can be avoided, then the person will act accordingly, after having formed the intention to do so. There are numerous variations of cognitive-behavioural models that describe the variables involved in this process (Conner & Norman, 1996; Glanz, Rimer, & Lewis, 2002).

While this approach is not entirely ineffective,—Sheeran reports effect sizes of changing attitudes and norms on health behaviour between 0.42 and 0.46 (Sheeran, 2006)—there are some fundamental problems with this approach and alternative approaches (that we will discuss in the next section) are more promising.

What are these problems with health education? In the first place it is well-known that people tend to resist information that challenges their behaviour, ideas or attitudes, and human beings are experts in finding excuses to justify their own behaviour, also when it is health-compromising. Secondly, the health education approach assumes that behaviour that has health consequences is also motivated by health considerations. While most behaviours are motivated by a range of motives, health motives are usually not predominant in health related behaviours. Take nutrition: We eat while it is time to do so, because others eat here and now, because we like this food even if we know that it is, in the long term unhealthy. Same is true for physical activity, sexual activity, smoking, and sleeping. Typically health effects of behaviour are only a long term possibility (I have a 20% chance to get a heart problem in 25 years from now") and short term, directly felt effects are much more influential than long term, potential (health) effects. Third, habits are resistant to change and changing them is costing an effort. So the typical effect of health education strategies is short lived, people relapse rapidly into their old habits, and for health this is rather in- or even contra-productive.

It should be noted that a number of recent advances to extend and supplement the traditional health education strategies have been proposed: (a) stages of change (Prochaska & DiClemente, 1986): behaviour modification is a process following different stages, rather than one step; (b) self efficacy (Bandura, 1997): people will more tenaciously make an effort to change if they see themselves as capable to do so; (c) goal setting (Gebhardt, 1997): goal pursuit is facilitated when the goal is specific, behavioural, short term, realistic and worth the effort; (d) implementation intentions (Gollwitzer, 1993): the probability that an intention will be acted upon is greater when the person specifically plans to take specific action at a specific time and place; (e) relapse prevention (Marlatt & Gordon 1985): people can be prepared to expect temporary "lapses"—a new habit is not formed once and for ever—and handle these.

On the other hand it has been shown clearly that, despite almost irresistible intuitive appeal, fear arousal is ineffective (Sheeran, 2006). With these recent additions, the scope of these strategies is far broader than the initial rational "educational" scope. Nevertheless, they keep focusing primarily on deliberate changes that individuals attempt to make in their behaviour. As we said this has a number of implications that show that an alternative approach deserves at least the same amount of attention and energy – and even more.

The Alternative – Ecological – Approach

Many of the important health related behaviours are to be understood as habits. Habit is defined as "a tendency towards an act that has become, by repeated performance, relatively fixed, consistent, easy, almost automatic" (English & English, 1958). One can ask why a specific act is repeatedly performed – and thus becomes a habit. We are convinced that this must be understood by the influence of the situational contingencies in the environment where the person is living and behaving. There are indeed a number of "structural" characteristics of situations that increase the probability that a specific behaviour will be performed. We see such factors at three levels: social, motivational and environmental: (a) at the social level, we see that in groups people behave according to social norms and social models; that stereotypes (the "jolly" drinker, the "alert" smoker, the "intelligent" professor) not only determine our attitude towards the stereotyped groups, but also our attitude towards the behaviour (drinking, smoking, studying,…); social pressure, disapproval or support, strongly diminishes or enhances the probability of a certain behaviour; (b) at the motivational level, it is quite natural that people will do the things that are rewarded and avoid the behaviour that has or is expected to have negative effects. Positive effects can be intrinsic (good taste of food, feeling fit, feeling of mastery, feeling normal, feeling nervous or tired…), social [support or (dis-)approval, being treated as attractive, ….] Effects can also have to do with "cost": is it easy or does it require an effort (physical, time, money,…), is there a risk of punishment because a rule is transgressed and how great is the risk. It has already been mentioned that immediate and directly felt effects have a much stronger effect than later, possible effects (of illness, of a fine for not respecting speed limits,…); (c) environmental variables include cues for action (classical conditioning), providing attractive means for action (good food, nice walking tracks, availability of cigarettes) or, on the contrary, barriers for action (risks involved in carrying condoms, no stairs available only elevator, no time for exercise, no clean water,…).

As an example we can explain what is meant by an "obesogenic environment" (Horgen & Brownell, 2002), (a) on the one hand, we live in a world where we have food available all the time (e.g. vending machines, night stores, refrigerators...): we are confronted with adverts for food on TV, billboards, press, and with consuming social models; food supply is easily available and of an unlimited variety; (prepared) food supply contains much sugar, fat, salt,... (and we tend to consume more of it) and is tasty, and junk food is less expensive than healthy food; prepared food does not require effort to get it, prepare it – we can eat it on the bus, at our desk, watching TV; patterns of regular meals (e.g. in family, at certain times, certain place...) are disrupted, (b) in terms of energy expenditure, we live in a world where: we don't have to be physically active: mechanisation, automation; pressure to perform at work, in school makes us prefer more passive relaxation; leisure time is spent watching TV, surfing internet; in urban environment (space for playing is limited, using other transportation than car or public transportation is difficult and dangerous, elevators and escalators replace stairs.)

In this obesogenic environment "normal" behaviour is overeating and live a sedentary life. Behaving differently requires a constant battle (= effort) against these pressures from the (social and physical) environment. People can behave "abnormally", but usually the pull from the environment makes them fall back rapidly. So it becomes evident that characteristics of our environment shape and maintain our habits, and that a number of important characteristics of our urban environment shape and maintain health compromising habits. Commercialisation, globalisation, mechanisation, disruption of traditional social networks and poverty are impor tant underlying factors in this respect.

If this is true, what has to be done? In principle the answer is quite simple: we have to change the environment and the environmental contingencies. Examples are: ban TV advertisements for unhealthy products (DuRant, Rome, Rich, Alfred, Emans, & Woods, 1997; Vereecken, Todd, Roberts, Mulvihill, & Maes, 2006), create attractive places for play and physical exercise (Linenger, Chesson, & Nice, 1991), increase price of cigarettes and alcohol (Murphy, Shelley, Repetto, Cummings, & Mahoney, 2003); increase availability of clean needles; increase availability & reduce price of healthy food; provide healthy social

models/prototypes (Sheeran, 2006).

While, indeed, this is simple in principle, the question, of course, remains: how can we do this? It is evident that we–scientists, prevention workers– have no power over these environmental variables. The unavoidable solution, then, is that we will have to collaborate with those actors that do control these environmental contingencies**.** And these are well-known: the political authorities have control over regulations (selling products to youngsters, traffic, advertisement in TV), over urban environment for walking, playing; over price policy for food, alcohol, tobacco, gasoline; over support for preventive programmes; over funding research. Economic forces also have a great impact: composition of prepared food products; promoting products and providing vending points of sale via distribution for food, cigarettes, alcohol; advertising products (creating stereotypes, social models, awareness for risk…); the hotel and catering industry controls part of drinking, smoking, sexual behaviour. Media advertise for specific products and have an influence on sale; they create social models, social norms and stereotypes. The school system and industry can reduce stress for students and workers. Social and cultural forces have an impact on stereotypes with regards to healthy and risky behaviour. The educational system has, in collaboration with parents, an important role in shaping healthy behaviour and establishing healthy social norms. Many more examples can easily be imagined.

To do so, i.e. to take up this task of behavioural scientists to contribute to a reorientation of prevention and health promotion where those actors that really control environmental contingencies take up their responsibility, requires a reorientation of our profession, involving training, commitment of our professional organisations and developing skills to collaborate with political authorities and economic forces. This will not easy, but it is feasible, and worthwhile (Vinck, Oldenburg & Von Lengerke, 2004).

Conclusion

To the question: ”How can psychologists, using psychological science, contribute to the prevention of illness and to the promotion of health, particularly in an urban environment?” We can answer: “We should stop focusing (almost exclusively) on individual responsibility and rationality, understand health related behaviour as habits and move to working with the situational contingencies that are eliciting and reinforcing behaviour.”

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[1] References are given as examples, not as a systematic review of most of the topics.

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