

# HIV Risk Perception in Relation to Impulsivity and Consideration of Future Consequences: A Review

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## **HIV Risk Perception**

Perception word is taken from the Latin word ‘percipare’ which means ‘to take hold’ or to ‘comprehend’. Perception refers to the way the world looks, sounds, feels, taste, or smells. In other words, perception is whatever a person experiences. The three dimensional world is perceived through our sense organs and processed to provide the basis for interaction with the external world. Therefore perception is one of the most important psychological dimensions to get in touch with reality of the world. If there is any discrepancy in perceptual process, one may misinterpret things in a wrong way. And this may lead to many serious consequences. Although the person justify his/her position to be right and strongly defends but they are not in a right position to see the serious consequences of their stand. This is what we call risky perception. Therefore risky perception is a faulty perceptual process that put people vulnerable to much risky behaviors. These behavior may include fighting, violence, smoking and drinking (e.g. as status symbol) and the most serious of all, HIV risk perception i.e. “*HIV infection can’t happen to me*”, “*alcohol and drugs have no relation with HIV infection*”, “*abstinence is foolishness*”, etc. HIV-risk perception scale (Singh and Saini, unpublished) has been used to measure risky perception of adolescents that can put them vulnerable to HIV infection. The decision to engage in risky behaviors such as risky sexual practices, drug abuse, etc.. may not always be a consciously made "decision." Rather, it is also based on an attempt to satisfy some other need. There may be a number of psychological factors that influences risky perception. These are explained below

## **II.2 Impulsivity**

Impulsivity is a multidimensional concept that involves the tendency to act quickly and without reflection, having something to do with restraining one's behavior, handling of different emotions, rapid processing of information, novelty seeking, and ability to delay gratification. It does not seem to depend on an impaired critical judgment, but on the loss of control over one's cravings, and has been described as a process over and above particular drives.

It is a measurable feature of behavior, manifested as impatience (including the inability to wait for rewards), carelessness, risk-taking, and pleasure-seeking, an underestimated sense of harm, and extroversion. Impulsivity is a core symptom of a broad spectrum of psychiatric disorders, including disorders of impulse control (pathological gambling, intermittent explosive disorder, pyromania, kleptomania, and trichotillomania), impulsive aggressive personality disorders (borderline, antisocial, histrionic, and narcissistic), neurological disorders associated with disinhibition of behavior, and substance abuse.

Biological processes have been the proposed causal link between personality and subsequent behavior (Zahn, Kruesi, Leonard, & Rapoport, 1994). In a number of leading personality theories (e.g. Barratt, 1985; Eysenck, 1967; Humphreys & Revelle, 1984), arousal is suggested to be the principal biological mechanism involved either directly in impulsivity or in impulsivity as a component of extraversion. Arousal, which refers to the general level of cortical excitement and autonomic activation (Gray, 1964), ranges from drowsiness or sleep to extreme emotional experience and behavioral activation (Humphreys & Revelle, 1984). It has been proposed that impulsive individuals tend to be physiologically under-aroused at rest (Barratt, 1985, Eysenck, 1993; Eysenck & Eysenck, 1985), although they experience relatively greater arousal increases in response to stimulation (Carrillo-do-la-Penã & Barratt, 1993; Houston & Stanford, 2001).

Impulsivity is a complex construct that has been defined in literature from *behavioral*, *cognitive* and *personality* perspectives. Within the *behavioral* approach, impulsivity has often been considered a manifestation of poor behavioral control (White et al., 1994), an unrestrained reaction style (Wallace, Newman, & Bachorowski, 1991) or a behavioral strategy reflecting high reactivity and rather low emotion regulation

(Pulkkinen, 1995, 1996). *Cognitive* definitions connect an inability to control and restrain cognitive activity (Schachar & Logan, 1990; Visser, Das Smaal, & Kwakman, 1996) and a rapid responding at the expense of correct solutions (Kagan, Rosman, Kay, Albert, & Phillips, 1964) to characteristics associated with impulsivity. Lawrence and Stanford (1999) have found that individuals with high impulsivity display lower accuracy and faster time estimation than individuals with low impulsivity. They argued that this provides the basis for impulsive behaviors such as making quick decisions and acting without thinking. From the *personality* perspective, impulsivity has been often regarded as a personality trait. Dickman (1990) distinguishes between two types of impulsivity, viz., functional and dysfunctional impulsivity. *Dysfunctional impulsivity*, a tendency to act with less forethought when this tendency is problematic, seems to reflect an inability to inhibit competing responses (Brunas-Wagstaff, Bergquist, Morgan, & Wagstaff, 1996; Brunas-Wagstaff et al., 1994). *Functional impulsivity*, in contrast, is the tendency to act with relatively little forethought when such a style is optimal (Dickman, 1990), which is related to the speed of information processing (Brunas-Wagstaff et al., 1994, 1996).

From the educational point of view, impulsivity as an aspect of behavioral self-regulation is of particular importance. Impulsivity has been demonstrated to be associated with disorganization, poor planning, lack of effective problem solving, failure to deploy mnemonic strategies, deficient self-monitoring (Levine & Jordan, 1987), high error scores (Brunas-Wagstaff, Bergquist, & Wagstaff, 1994), and poor academic performance (Kipnis, 1971).

Shapiro (1965, p. 135) has defined *impulsivity* as a tendency to act on the spur of the moment, without planning or a clear sense of decision or desire, as if ‘the regular executive apparatuses or generally operative modes of functioning are bypassed or broken through.

Impulsivity can be viewed as a dimension of normal personality (Eysenck & Eysenck, 1977), but high levels of impulsivity are associated with psychiatric disorders such as ADHD, mania, substance abuse and personality disorders, indicating that this personality trait can be maladaptive (DSM IV, 1994). Psychiatrists consider impulsivity

in a broader way, as a tendency to perform acts that are harmful to self or others (see DSM-IV, American Psychiatric Association, 1994).

Impulsivity has some common themes including decreased inhibitory control, intolerance of delay to rewards and quick decision-making due to lack of consideration, as well as more universal deficits such as poor attentional ability. Therefore, one definition of impulsivity which seems particularly appropriate is that “impulsivity encompasses a range of actions which are poorly conceived, prematurely expressed, unduly risky or inappropriate to the situation and that often result in undesirable consequences” (Daruna & Barnes, 1993).

According to Moeller, Barratt, Dougherty, Schmitz, and Swann (2001), impulsivity is defined as ‘a predisposition toward rapid, unplanned reactions to internal or external stimuli without regard to negative consequences of these reactions to themselves or others’. Within the behavioral analysis domain, it is believed that impulsive individuals show deficient tolerance of delay of gratification or have difficulty in delaying or inhibiting voluntary responding (Logue, 1995).

Dawe et al. (2004), and deWit and Richards (2004) define two broad dimensions of impulsivity. The first dimension can be labelled as “behavioral disinhibition or rash impulsiveness”. This includes problems both in response initiation and response inhibition. In this respect, impulsive behavior can be a consequence of responding prior to complete processing and evaluation of a stimulus (“acting without thinking”) or can result from a failure to inhibit an already initiated response (response inhibition). A second dimension has been labelled as “consequence sensitivity or impulsive decision-making” (deWit & Richards, 2004). Here, impulsivity is defined as behavioural choices (“decisions”) that persist despite negative or less than optimal consequences, i.e., a preference for small immediate rewards over later, larger rewards (“delay discounting”) or a preference for larger immediate rewards coupled to later, uncertain larger punishments versus smaller immediate rewards associated with smaller, later punishments (“risk discounting”) (Monterosso, Erhman, Napier, O’Brien, & Childress, 2001).

### **Consideration of Future Consequences**

The consideration of future consequences (CFC) is a personality trait defined as the extent to which individuals consider the potential future outcomes of their current behaviour and the extent to which they are influenced by the imagined outcomes (Strathman, 1994). Individuals who score highly on a measure such as the Consideration of Future Consequences Scale typically focus on the future implications of their behaviour, whereas those low on CFC typically focus more on their immediate needs and concerns.

CFC has been shown to have implications for health-related behaviours, as those performed to protect health typically involve delayed benefits and immediate costs. Individuals who ignore the future consequences of their behaviour will tend to focus more on short-term needs and the likelihood of these individuals performing a health-related behaviour depends on their evaluation of the inconvenience, loss of pleasure, or psychological costs of the immediate behaviour. Individuals who think ahead to the future consequences of their present behaviours are more inclined to act in ways that are protective of their future health and well-being.

Varying levels of CFC have been found to be related to smoking and alcohol consumption, where individuals with higher CFC scores report lower frequencies of each behaviour. High CFC individuals have also been shown to be more cautious about their sexual activity, have fewer sexual partners, are more likely to use alternate methods of reducing exposure to HIV (e.g. inquiring about partner's sexual history, delaying or abstaining from sex), and are more likely to seek out HIV-testing. People high in CFC have also been found to have more regular sleep schedules.<sup>[6]</sup> Conversely, low CFC has been shown to be associated with higher Body Mass Index.

Considering the future implications of one's behavior is also important when making decisions regarding treatment options for health problems. For example, increasing evidence suggests that long-term estrogen therapy raises the risk of breast cancer,<sup>[9]</sup> drugs used to reduce stomach acid have been linked to numerous future health problems, and long-term blood pressure medication use can cause a number of side

effects. The immediate benefits of certain treatments may be positive in the short-term but the long-term risks associated with these treatments can lead to health issues in the future.

The degree to which one considers the consequences of one's actions has implications for many important life domains from career achievement to retirement planning to health promotion. Indeed, avoiding chronic diseases such as heart disease, some cancers, and HIV/AIDS may depend on one's ability to forego immediate tangible pleasures for the sake of distant, abstract outcomes (Rothspan & Read, 1996; Strathman, Gleicher, Boninger, & Edwards, 1994).

People who look ahead to the future consequences of their present behaviors may be more likely to think and act in ways that are protective of their future health and wellbeing. For instance, research has found that college students who consider the future consequences of their behaviors are more likely to have regular sleep schedules, higher-grade point averages, and fewer sexual partners than their counterparts who are more focused upon the present moment (Joireman, 1999; Peters, Joireman, & Ridgeway, 2005; Rothspan & Read, 1996). More future-oriented people have also been found to be more likely to engage in preventive health behaviors such as seeking out HIV-testing (Dorr, Krueckeburg, Stratham, & Wood, 1999) and intending to be screened for colorectal cancer (Orbell, Perugini, & Rakow, 2004).

People who focus more upon the present, on the other hand, are theorized to prefer to engage in behaviors in which the rewards of the behavior are more immediately apparent. Such people are less likely to be motivated through a difficult work-out, for example, by the thought of decreasing their chances of heart disease years from now than by the instantly gratifying aspects of the work-out itself. Thus, the idea of tailoring a health message to reflect a person's consideration of future consequences, or CFC, would seem to be a useful way of persuading individuals to take protective measures with their health.

A useful framework for understanding the processes through which people form intentions to engage in health behaviors is the Theory of Reasoned Action and Planned Behavior (Ajzen, 1991; Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). This theory,

which is frequently utilized in health psychology research (Armitage & Conner, 2001), states that intentions to act are influenced by a person's attitude toward a health behavior, the subjective norms set by important others in the person's life with regard to that behavior, and the amount of perceived behavioral control they report having over pursuing the behavior.

The variables associated with the Theory of Reasoned Action and Planned Behavior, or TPB, have been found to mediate the relationship between consideration of future consequences and the intention to take preventive action with one's health (Orbell et al, 2004). For example, a person who encounters a health message that has been modified to match her level of CFC may be more likely to form a positive attitude toward the health behavior described in the message, leading to a stronger intention to pursue that behavior. Unfortunately, the Orbell et al (2004) study was one of few that has utilized TPB as a framework for explaining how a present or future orientation might affect intentions to engage in health behaviors.

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