Adolescents' perception of their own risk-taking behaviour

I There have been numerous studies on risk perception. The psychometric approach, which is a factorial system using two or three elements, has been preferred. This approach is described as concerning the nature of risks, the knowledge of persons exposed to those risks and the effects to which they are exposed (Slovic, Fischhoff and Lichtenstein, 1980; Slovic, 1987). Other authors have looked at risk perception among adolescents, or young adults, by analysing both the nature of their various “problematic” activities and the differences which can exist between risks that are truly incurred and the perception of such risks (Benthin, Slovic and Severson, 1993). Adolescents were questioned on their knowledge of these risks, their consequences, benefits to themselves or others, the possibility of refusing to run them and external control or regulation of them. The results tended to show that the subjects who engaged in these activities said that they well understood the risks and could curb them (the cognitive perspective). There was also evidence of strong peer influence (in expectation of benefits) and a reduced desire for adult supervision (social perspective). The influence of peers has long been recognised (Jessor and Jessor, 1975; Jessor, 1984; Irwin and Millstein, 1986; Tubman, Windle and Windle, 1996).

We can compare this research to a study (Smith and Rosenthal, 1995) which, in addition to searching for explanatory models of risk evaluation on the same basis (risks in relation to oneself, to others, the benefits, the sensation of controlling the risk, peer recognition, parental comprehension), asked the adolescents to arrange the risks in a hierarchy. They divided them into two categories: (a) situations which they considered to be high-risk, including the act of driving or of being a passenger in a vehicle while under the influence of alcohol or drugs, the use of inhalants or amphetamines, the practice of unprotected sex; and (b) situations which they considered to be lower-risk, for example, drinking alcohol (beer, wine or stronger alcohol) as well as drinking and smoking to excess on certain occasions. Surely, the perception of risk can differ between adolescents who have taken risks and those who have not (Gonzalez, Field, Yando, Gonzalez, Lasko and Bendell, 1994).

One positive characteristic of a critical approach is that of offering a basis for dialogue with adolescents rather than, for example, to purely and simply suppress risk-taking. This interferes with the process of self-identification and the move towards autonomy in adolescence. Thus, we can conclude that adolescents who take risks have higher self esteem, weaker bonds and less intimacy with their mothers as well as fewer family responsibilities (Gonzalez, Field, Yando, Gonzalez, Lasko et Bendell, 1994). In the meantime, it is difficult to predict how this risk-taking will contribute in a constructive manner to development during adolescence. The fact that adolescents have a tendency to associate or cumulate risk-taking behaviours is a constant in all studies, but also tends to show that they are suffering (Donovan and Jessor, 1989; Biglan, Wendler, Wirt, Ary, Noell, Ochs, French, Hood, 1990).

Aim
The aim of this research is to gain a better understanding of the representations of risk-taking behaviours during adolescence held by the adolescents themselves. It is also concerned with comparing these perceptions with those of the adults who are involved with them (parents or teachers).

Methods
Subjects
The sample of adolescents interrogated consisted of 208 9th-grade boys and girls, from three urban and rural establishments (in the “Loire et Cher”, in France). Ninety-seven were boys (47%) and 111 were girls (53%). Ages ranged from 14 to 18 with a mean of 15.5 (S.D. = 0.8 years). There was no significant difference between the boys’ and girls’ ages. In addition, a total of 70 adults (75% women), 49 teachers from the same establishments and 21 parents of the students, were interrogated. Their age range was 20-57 years with a mean age of 39 years (S.D. = 9.5 years). The adults were asked about their perceptions of adolescents’ risk-taking behaviours (their students or their children). However, these results will only be given for comparative reasons or as a basis for further thought.

Key words
- representation
- perception
- risk-taking behaviour
- adolescence
- health education
- France
The questionnaire was self-administered during class time during the second semester of the academic year 1997. The instructions were clear and anonymity was guaranteed. Each participant answered the questionnaire alone during class time in the presence of one adult: the school doctor assigned to the establishment (the second author).

**Evaluation of seriousness**

While analysing the results, we were surprised to notice that all the various categories of behaviour appeared serious to the students (that is, higher than average seriousness). The types of behaviour they felt to be the most serious were: suicide attempts, driving while intoxicated or under the influence of alcohol and drugs and failure to use protection during the first sexual encounter. Thefts committed outside the home were also considered more serious than those committed within the home.

**Auto or hetero-aggressiveness**

All the types of behaviour were experienced as auto-aggressive except: fights or other forms of aggression to others, both peers and teachers, destruction of equipment, theft and running away. To a lesser degree, “risky” sex (unprotected sex, multiple partners) and risk-taking while driving were perceived to be more hetero-aggressive than the other behaviour.

**Calling for legal intervention**

All behaviour for which the students felt that legal intervention was necessary (that is, adult intervention, remanding and/or sanctioning illegal or ill-advised behaviour) were placed on the right of the graph. These include: ingesting or inhaling illicit drugs, risk-taking while driving and all violent and antisocial behaviours. Consumption of licit drugs (tobacco and alcohol), the act of having multiple sexual partners or having a sexual relationship with someone much older, pregnancy, crossing the road without looking, having numerous accidents and anything concerning the body (suicidal attempts, eating disorders, etc.) are on the left of the graph. Auto-sabotage in school and thoughts about death are on the extreme left side of the graph. This could lead to strategies for prevention because, for example, while tobacco and alcohol are licit drugs, they can be associated with other forms of risk-taking and thus facilitate the consumption of other psychoactive substances (Takakura, Ueji and Sakihara, 2001; Duong Dinh Cong, Vo Thi Xuan Hanh, Ho Th Huong and Deschamps, 2001).

**Calling for psychological help**

All “corporal” behaviours (bulimia, suicidal attempts, etc.) and school auto-sabotage are perceived to call for psychological help.

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**Table 1: Questionnaire**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>To sabotage oneself in school (in terms of grades)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>To skip school (truancy)</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>To be expelled from school</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>To fight</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>To be aggressive towards teachers</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>To damage equipment</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>To steal within the home</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>To steal outside the home</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>9</td>
<td>To run away from home</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>To attempt suicide</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>11</td>
<td>To think about death</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>12</td>
<td>To be anorexic</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>13</td>
<td>To be bulimic</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>To have numerous (violent) accidents</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>To drive a motor-cycle without wearing a helmet</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>16</td>
<td>To cross the road without looking</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>17</td>
<td>To take risks while driving (a two-wheeled vehicle)</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>To drive (a two wheeled vehicle) after drinking too much</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>To drive (a two wheeled vehicle) after taking drugs</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>20</td>
<td>To consume alcoholic beverages</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>21</td>
<td>To be intoxicated</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>22</td>
<td>To smoke</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>23</td>
<td>To use cannabis (hashish, herbs, marijuana...)</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td>24</td>
<td>To inhale glue or solvents</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>To use ecstasy</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>To use another drug</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>To have multiple sexual partners during the year</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>To not use protection during the first sexual encounter</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>To be pregnant while still a minor</td>
<td>✓</td>
<td></td>
<td></td>
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</tbody>
</table>

**Material**

The material used was a closed, anonymous questionnaire, consisting of 29 items, with which the subject could agree or disagree on a 7-point scale of the “in complete disagreement to in full agreement” type. These items proposed a panel of different “risk-taking” behaviours. The students were questioned on four axes: 1) the seriousness of these behaviours, 2) their auto- or hetero-aggressiveness, 3) the necessity of responding to them with legal intervention or 4) the necessity for a response of psychological help.

**Procedure**

The questionnaire was self-administered during the second semester of the academic year 1997. The instructions were clear and anonymity was guaranteed. Each participant answered the questionnaire alone during class time in the presence of one adult: the school doctor assigned to the establishment (the second author).

For teachers and parents, the questionnaire was administered with a simple explanation and, there again, anonymity was observed. The questionnaire could only be administered to those adults who agreed to take part in the study.

**Results and discussion**

These data were analysed by considering the average answers of the students to each type of behaviour in the following 4 categories: 1) the seriousness of the behaviour, 2) their auto or hetero-aggressiveness, 3) a call for legal intervention, 4) a call for psychological help. Next, a wider approach was applied, which took into account all four dimensions at the same time. This was undertaken first for the whole group of adolescents, then for just the boys, followed by just the girls and finally for the adults. In the interest of clarity, we will emphasise the overall results and give the differences between boys and girls, as well as young people and adults.
psychological help. The second group of behaviour which can also indicate individual suffering, but to a lesser degree, is drug consumption. The same group of behaviour types that did not call for legal intervention does not call for psychological help either. These are: the use of tobacco and alcohol, truancy, multiple sexual partners, unprotected sex or sex with an older person, repetitive accidents etc.

**The combined approach**

Figure 1 is the result of a combination of the four preceding approaches. This four-dimensional figure allows for a synthetic reading which is at the same time complementary. The reading of this figure is explained in Figure 2. We can extract three groups of behaviour types: - The **first group** (1) which we will call "medico-psychological", in which behaviour types are characterised by their seriousness, their auto-aggressiveness, the need for a psychological response and not legal intervention. On the whole they are characterised by easily identifiable suffering and their concern with bodily troubles. It should be noted that suicide attempts are perceived to be the most serious of these types of behaviour. Running away is the most hetero-aggressive behaviour of this group.

- The **second group** (2) which we shall call "drugs, violence, and risk-taking while driving" (see Figure 2) and which also consists of two sub-groups:
  - The first sub-group (2a) entitled "drugs", concerns consumption and inhalation of illicit drugs. This behaviour is perceived to be as serious as auto-aggressiveness but to require legal intervention more than psychological help. It should be noted that theft outside the home falls within this group.
  - The second sub-group (2b) "violence, transgression and risk-taking while driving" concerns hetero-aggressive behaviours and requires legal intervention. These behaviour types involve violence and incivility, destruction of property, and driving under the influence of drugs. This group also includes other types of risk-taking on the road (previously on the right of Figure 2).

- A **third group** (3) consists of diverse behaviours previously shown in the left of the graph. It includes, on the one hand, taking sexual risks (multiple partners, older partners, unprotected

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**Figure 1**

*Representations by the adolescents of their risk-taking behaviours*

**Figure 2**

*Explanation of the graph on the representation by the adolescents of their risk-taking behaviours*
Sexual intercourse) and on the other hand the use of tobacco and alcohol, truancy, expulsion from school, and finally domestic thefts.

The difference according to gender
In a comparative approach between boys and girls we can accentuate that girls have a tendency to judge as more serious and more auto-aggressive behaviours from the "medico-psychological" group (thoughts of death, tendency of suicide, and eating disorders), those from subgroup (2a) as well as part of those from subgroup (213) (risk-taking while driving).

Girls judge fights and running away to be more serious, and vandalism, domestic theft, smoking and the thoughts of death to be less so. They tend to consider risky sex (not using protection, or pregnancy) to be auto-aggressive. More than boys, they feel that legal intervention is necessary for the behaviours of group 2 "drugs, violence, and risk-taking while driving". However, on the contrary, they were less in favour of group 1 ("medico-psychological") type behaviour. They believed psychological help was necessary for group 1 and group 2 behaviour. Finally, they did not feel that the behaviour of the third group, such as taking sexual risks, tobacco use and domestic theft called for legal intervention or psychological help. These findings support the differences between girls' and boys' behaviours (Donovan and Jessor, 1985; Choquet, Marcelli and Ledoux, 1993). We find a form of dichotomy between masculine versus feminine behaviours, with acting behaviours on one side and corporalised on the other, or behaviour troubles (with an anti-conventional or anti-social dimension) versus somatic or medico-psychological problems, external behaviours versus internal behaviours.

Comparison with the adults' perceptions
We examined the answers from 70 adults, which led us to a synthetic analysis of their perceptions of risky behaviour during adolescence. This resulted in a figure that could almost be superimposed on the preceding but with wider variations. They considered the different types of behaviour to be more serious than the adolescents did, and were more likely to see a need for legal intervention, essentially for behaviours of group 2, and psychological help for groups 1 and 2a. On the other hand, the group 3-type behaviour described by the students, had a tendency to disappear as an individual entity in the adult perceptions and be absorbed into group 1. In other words, the adults who answered the questionnaire were more likely to see a need for psychological help, especially for drunkenness, intoxication, accidents, domestic theft and school difficulties (truancy and expulsion) than the adolescents themselves.

Conclusion
In conclusion, we deduced that there are two principal groups of adolescent risk-taking behaviour types:
- The first group (1) is "medico-psychological." The behaviour types (eating disorders, suicidal attempts, etc.) are characterised by their seriousness, their auto-aggressiveness, the strong need for a psychological response, but not for legal intervention. These behaviours were predominantly feminine.
- The second group (2) we can call "drugs, violence, and risk-taking on the road." Here the behaviour types were perceived to require legal intervention. These behaviour types were divided into two subgroups: (2a) using and inhaling forbidden drugs was perceived as serious, auto-aggressive and requiring psychological help (even if this is secondary to the necessity of legal intervention); (2b) that of risk-taking while driving, violence and transgressive behaviours which were not perceived to require psychological help. This group of behaviour types was predominantly masculine.

The perceptions of girls and boys tended to differ in the sense that girls were inclined to identify the first group of behaviour types as indicative of suffering and also recognised the seriousness of drug taking and taking risks while driving. On the other hand, boys considered the second group of behaviour types (drug taking and violence) to be common and not particularly serious.

References
Finally there are other behaviour types (group 3) which are neither perceived to require legal intervention nor psychological help. These are: the consumption of licit drugs, absence from school, repetitive accidents and taking sexual risks that we “health professionals” judge to be dangerous: (multiple partners, lack of protection or much older partners). These results are worrying, considering the measures available for prevention and health education.

On the whole, the students’ perceptions were quite similar to those of the adults who were questioned, and to those of the society as a whole. Other studies have shown that adolescents’ perception or their preoccupations with health issues reflect what adults instill into them (Jutras, Tremblay and Morin, 1999); and, in this sense they reflect the customs of a society or its tradition (Duong Dinh Cong, Vo Thi Xuan Hanh, Ho Th Huongn and Deschamps, 2001). These findings lead us on one hand to conclude that training of health professionals must take adolescents’ perceptions about health into account and, on the other hand, that we must be more vigilant that boys have access to health care and that means to interpret their psychological suffering be available.

**Limitations**

This study can be seen as an exploratory work. Our empirical method was creative and allowed us to confirm the tendencies which we observe as health professionals. Our findings appear to be echoed in a review of the literature. However this study should be confirmed by further study. The small population of adolescents, although carefully chosen to best reflect a population of 9th-grade students in urban and rural sectors, cannot be considered as representative of the French population. The results concerning volunteer adults (parents and teachers) were only given as an indication and should also be studied in greater depth on a larger population.