tions, in turn, likely continue to reinforce the traditional role of school psychologists. Furthermore, university E&T programs need to be examined as to the extent to which the current Zeitgeist, which emphasizes child-environment interaction, zones of proximal development and the importance of contextual factors, has impacted E&T programs in a real sense.

Both the "educational" and "clinical" perspectives to practice appear thriving in the delivery of school psychological services. This is reflective of the diversity of the field where psychology interacts with education as well as within the training programs themselves (Fagan, 1990). Psychologists of both orientations rely on their respective E&T backgrounds and knowledge-base and, by and large, feel equally able to use them in their practice. Psychologists with "clinical" orientations feel the need for more training in areas that are central to schooling and educability.

Evidently, it is important for trainers of school psychologists to consider the feedback from practitioners in the field and implement appropriate modifications in their respective training programs. At the same time and in the context of the discussion in the literature on "school psychology paradigm shift" (Bartell, 1996; Reschly & Ysseldyke, 1995), trainers have the opportunity and responsibility to introduce and socialize graduate students toward new paradigms and modalities of practice. A national consensus on a core training program will advance the preparation and practice of Canada in school psychologists in the service of children and their families and communities.

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Youth Gambling Problems: A New Issue for School Psychologists

Jeffrey L. Derevensky

Rina Gupta

Department of Educational and Counselling Psychology, McGill University

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Daniel Reschly's and James Ysseldyke's opening chapter in the third edition of Best Practices in School Psychology discusses the paradigm shift in our work as school psychologists. Their paper presents different paradigms which have been used in the development and delivery of school-based psychological services. They conclude their paper by reviewing major public policies affecting children and examine the underlying principles and strategies presently being used by school psychologists.

Beyond the paradigm shifts that have taken place in the past several decades it is abundantly clear that the roles of school psychologists is becoming more complex, that the way we spend our time is shifting and evolving (more in some jurisdictions, less in others), and that situational factors often directly influence our practice. Some major examples include the work at the preschool level, concerns focused on children from divorced or abusive homes, new knowledge acquired from studying bilingual education, among many others.

Other situational factors including the growing concern for violence in our schools, a general increase in cigarette smoking, alcohol and drug consumption, and increases in sexual activity among school-aged adolescents have also directly affected our work. Recent data from the Nova Scotia Student Drug Use Survey (1998) attests to what school psychologists have known for a long time concerning the increasing prevalence of children and adolescents engaged in cigarette smoking, alcohol and drug use, and increased sexual promiscuity.

Although problem gambling has been primarily thought of as an adult behavior, recent research has suggested that it remains a popular activity amongst both children and adolescents. An alarmingly high percentage of children and

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adolescents are engaged in gambling activities. Recent studies done in Nova Scotia, Quebec, Manitoba, Newfoundland, Labrador, Prince Edward Island, New Brunswick, and Alberta all indicate that this is a growing concern. In one of our recent studies of adolescents in Quebec we found 80.2% report having gambled during the past 12 months and 35.1% reported gambling at least once per week. The Nova Scotia results indicate that 74.7% engaged in gambling behavior with 34.1% doing so at least once per month. Scratch tabs, cards and lotteries were the most common form of gambling.

Research conducted over the past decade suggests that gambling activities remain particularly attractive to today's youth and its popularity is on the rise amongst both children and adolescents. Large scale prevalence studies conducted in the United States, Canada, New Zealand, Europe, and in Australia all confirm the rising prevalence rates of youth involvement in both legal and illegal forms of gambling. Estimates are that between 4-8% of adolescents presently have a serious gambling problem with another 10-14% of adolescents at-risk for developing a serious gambling problem. Our recent data suggests that while 55% of adolescents are casual or recreational gamblers, 13% have some gambling related problems, and 4-6 % have a serious problem. The Nova Scotia data revealed that 2% of students reported gambling related problems and 2% indicated they were unable to stop even though they wanted to do so.

Yet, for most parents, teens, educators, and school psychologists, gambling is viewed as a relatively innocuous behavior with few negative consequences. While school psychologists and educators remain concerned about student smoking and use of alcohol and drugs, little attention has been focused upon gambling behavior. Our data from Quebec shows that gambling is engaged in on a regular basis more frequently than any other potentially addictive behavior.

Of further concern is the finding that retrospective studies of adult problem gamblers report the onset of their pathological behaviors to have begun quite early, often beginning between the ages of 10-19. A large scale study of adolescents in Alberta found that most problem gamblers began gambling, on average, around the age of 10 with similar results being found in our study of secondary school adolescents and young adults in Quebec. Of particular concern is the finding that the time between the onset of one's initial gambling and an addiction appears to be significantly decreasing.

Typically, most individuals portrait of a problem gambler is an adult male who has lost his job, his family, has frequently committed some crime in order to support his behavior, has deserted his children, etc. While the stereotyped individual was in the past to have been a race track fanatic, the perception is being modified to include those addicted to video lottery terminals and video poker machines as well as Casinos.

While there remains an element of truth to the adult profile, the profile for adolescent gamblers with serious problems look somewhat different. Many are still students, they have never been married, lost full time jobs or deserted their families. Problematic gambling among adolescents have clearly been shown to result in increased delinquency and crime, the disruption of social relationships, an impairment in their academic performance and work activities, and under extreme conditions can result in suicide.

However, while these youth present themselves differently from adults, they nevertheless have similar characteristics. They have a preoccupation with gambling, sacrificing school, parents and friends in order to maintain their gambling behavior.

Contrary to public opinion, our research and clinical work suggests that money is not the predominant issue as to why adolescents engage in gambling activities. Rather, money is used as a vehicle which enables them to continue playing. Most adolescents report that the primary reasons for gambling are for the excitement and enjoyment derived from these activities. Through their gambling activities, either with video lottery terminals (often referred to as VLT's), sports betting, cards, or other forms of gambling, adolescents with gambling problems exhibit a number of dissociative behaviors; escaping into another world, often with altered egos. When playing, adolescents with serious gambling problems report that nothing else matters and that all their problems disappear. For an adolescent with a gambling problem, a good day is walking into a gaming room with \$20, playing all day, and losing all the money. A bad day is when the \$20 only lasts 10 minutes.

Our program of research has been designed to help identify the risk factors associated with gambling problems among youth, to examine the antecedents of the problem, and to identify effective strategies for the prevention and treatment of youth with serious gambling problems. Despite some conflicting findings, there appears to be an overall consensus that a) gambling is more popular amongst males than females, b) probable/pathological gamblers are greater risk-takers, c) adolescent prevalence rates of problem gamblers are 2-4 times that of adults, d) adolescents with problem/pathological gambling behaviors have lower selfesteem, higher rates of depression, and dissociate more frequently when gambling, e) adolescents with gambling problems are at increased risk for suicide ideation and suicide attempts, f) while adolescents with gambling problems report having a support group. old friends are quickly discarded because of their lying and debts and are replaced by gambling associates, and g) adolescent problem gamblers frequently engage in other addictive behaviors (e.g. alcohol and drug use). Preliminary research on personality traits reveals adolescent pathological gamblers are more excitable, extroverted, anxious, tend to have difficulty conforming to societal norms, and experience difficulties with self-discipline. Our research and clinical data seem to suggest that

these adolescents have poor coping and adaptive skills. They remain unable to cope with the many adversities they experience resulting from difficulties at home, school or with peers. Gambling becomes a means of escaping the unpleasant realities of daily life.

Problematic gambling during adolescence remains a growing social problem with serious psychological, sociological and economic implications. Given that there are frequently few observable signs of gambling dependence (sometimes referred to as the "hidden addiction") among children and adolescents, such problems have gone relatively undetected compared to other forms of addiction (e.g. substance and alcohol abuse). The devastating impact upon the individual and entire family when a member has an addictive disorder has been well documented.

While occasional gambling should not necessarily be considered problematic, the probability of children and adolescents becoming problem or pathological gamblers remains worrisome. Given that there are frequently few observable signs of gambling dependence amongst children and adolescents, and the general paucity of research in the area, such problems have gone relatively unnoticed compared to other forms of addiction. Our past research clearly shows that children are frequently gambling for money with their parents and other family members. Young children form partnerships with their parents on lottery tickets and scratch cards, and play cards and bingo for money with relatives. Many of the children report receiving scratch lottery tickets as Christmas stocking stuffers. In yet another study, we found that by the time children leave elementary school less than 10% of children fear getting caught gambling.

Today, children and adolescents are informed via schools about the dangers inherent in smoking, alcohol, and drug consumption. Few, however, are informed as to the addictive qualities potentially inherent in gambling activities. Many schools inadvertently endorse gambling by having bingo or casino nights for their students as a form of fund raising. Frequently, adolescents only become cognizant of the potential addictive quality of gambling after either they or their friends develop problematic gambling behaviors. It is believed that this lack of public awareness is contributing to the increasing number of children and adolescents who are currently struggling with gambling and gambling-related problems.

Educators have long advocated that the way to succeed in life is through hard work, study, and academic achievement. Yet, the government, through Provincial supported lotteries, suggest that for \$1.00 you can become an instant millionaire. Consistent with our data from Quebec, the Nova Scotia study revealed that sports pools and sports betting are particularly attractive to youth, especially boys. Allowance and lunch money are often used to purchase these tickets.

There remains little doubt that as school psychologists we need to change our focus from the "treatment of the dysfunctional or diseased model" to a prevention model

aimed at an at-risk population. We are presently developing several school-based prevention programs which are predicated upon several premises: 1) the need for public awareness, 2) the appropriateness of the school system to implement the prevention program, 3) the teaching of successful coping and adaptive skills that would prevent the development of problematic gambling, and 4) the identification, assessment, and referral of students whose gambling behavior is indicative of them being at-risk.

What are the signs for problem gambling? There are a number of instruments used to help identify problem gambling amongst youth (e.g. SOGS-RA, DSM-IV-J-R, GA20). While they each have their own merits our research indicates that the DSM-IV-J-R is the most conservative of the measures. Here are the items:

- Do you often find yourself thinking about gambling activities at odd times of the day and/or planning the next time you will play?
- Do you lie to your family or friends or hide how much you gamble?
- After spending money on gambling activities do you play again another day to try and win your money back? (More than half the time)
- In the past year have you spent your school dinner money, or money for bus fares, on gambling activities?
- In the past year have you taken money from someone you live with, without their knowing, to gamble?
- Do you ever gamble as a way of escaping problems?
- Do you find you need to spend more and more money on gambling activities?
- In the past year, have you stolen money from outside the family, or shoplifted, to gamble?
- Do you become restless, tense, fed up, or bad tempered when trying to cut down or stop gambling?
- In the past year, have you gone to someone for help with a serious money worry caused by participation in gambling?
- Have you fallen out with members of your family, or close friends, because of your gambling behavior?
- In the past year, have you missed school to participate in gambling experiences? (5 times or more)

If the child responds positively to four or more items he or she likely has a serious gambling problem. Two or three positive responses indicate that the youth is at-risk for developing a problem. These items have been incorporated in posters and pamphlets which are prominently posted in Secondary Schools. Identifying the community resources for youth treatment is important. School psychologists need in-service workshops and training for the identification and treatment of youth who are pathological gamblers.

Gambling venues and outlets continue to grow with our Provincial governments sanctioning and encouraging partic-

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ipation in spite of the rising social costs. While most gambling is illegal for minors, there is clear evidence that underage youth continue to actively participate in these activities with many reporting engaging in this behavior with family members. Adolescents and even children manage to purchase scratch tabs, lottery tickets, sport select, play on video gambling machines, and enter casinos with sophisticated false identification cards. While prohibited form casinos we recently had one high school student walk into our treatment facility who lost \$10,000 in one evening.

Many schools hold 'casino nights' or 'bingo games' as a form of fund raising and entertainment. This type of behavior for adolescents is inappropriate. Unfortunately, gambling appears top be the new rite of passage into adulthood. Gaining entry into the casino has replaced getting into the local night club. Nevertheless, school psychologists need to be aware of the potential warning signs of gambling problems and to encourage youth experiencing problems to seek assistance. Similarly, we must sensitize parents and teachers to the potential problem as the consequences can be devastating.

Editor's Note

A Nova Scotia entrepreneur is proposing a novel treatment for gambling addiction. Mr. Percy Paris, Chief Executive Officer of M.Power Innovations is hopeful that the PAGIS system will offer problem gamblers a possible solution to video lottery terminal (VLT) addiction. Psychologists interested in PAGIS system are encouraged to read the following.

Press Release

PAGIS System Gives Problem Gamblers a Fighting Chance

Truro, Nova Scotia – August 3, 1999 – Two Maritime companies have introduced an ingenious wireless product to help problem gamblers address their compulsive playing of electronic gaming machines. The PAGIS system has been designed and developed by M.Power Innovations Limited of Truro, Nova Scotia and COM DEV International's Wireless Group of Moncton, New Brunswick. M.Power will market PAGIS which will be manufactured by COM DEV in Moncton. With the new system, problem gamblers receive an audible warning tone on approaching a machine, and if they try to use it, the machine suspends play.

Using double-distance radio frequency technology, the PAGIS system consists of a board, installed inside electronic gaming machines, such as VLTs and 'Slots' and a mobile unit, worn by the gambler. Installation of the board is quick and easy, requiring no alterations to the electronic gaming machine. While the mobile unit can take many forms, th most popular is that of a discreet, unobtrusive bracelet, an attractive piece of jewelry resembling a watch or an identification bracelet, that is weatherproof and adheres to all safety requirements.

When wearers of a mobile unit enter an establishment equipped with the PAGIS System they can still freely enjoy the goods and services available except for VLTs or slots. If they come within three meters of a VLT or a Slot, the machine emits an audible tone to alert them to the fact that they have entered a 'risk' area.

If they ignore the warning, continue to approach the VLT or Slot, and attempt to play, the machine automatically suspends operation. As soon as they move more than one meter away from the machine, it immediately returns to continuous play mode. At no time are other players interrupted, and the machine require no special adjustments to resume operation.

The system is being introduced to enhance and support other existing treatment initiatives, such as counseling. PAGIS is not a cure for gambling, but serves as supplemental assistance to individuals who have acknowledged a need to manage their gambling problems. Any player who has admitted to a problem, and wants to do something about it, is a candidate. Wearing the mobile unit is voluntary and supplements any other intervention the wearer may be receiving.

COM DEV International Ltd., a member of the TSE 300 (TSE/ME: CDV), is the largest Canadian-owned manufacturer of space and ground-based wireless communications products and subsystems, and consists of three operating units: the Space Group, the Wireless Group, and Wireless Systems. COM DEV employs more than 1,300 people in facilities in Ontario, New Brunswick, the United States, the United Kingdom and China.

M.Power Innovations Limited is a newly incorporated Nova Scotia company with head offices in Toronto.

For More information, contact Percy A. Paris, Chief Executive Officer, M.Power Innovations Limited 902-893-2356

The Global School Psychology Network

Gayle L. Macklem, M.A., NCSP, Manchester Public Schools, GSPN Research Team Rachel Kalinsky, M.Ed., CAGS, Chelmsford Public Schools, GSPN Research Team Louis J. Kruger, Psy. D., Northeastern University, Director, GSPN Research Team

The day to day work of a school psychologist can be exceedingly hectic and isolated. It is not unusual for a school psychologist to be the only school psychologist in a school system, or to work between buildings without strong connections to a community of professionals. When special training is offered, it is most often designed to meet the needs of general education staff rather than specialist staff. In addition, many individual school psychologists do not have convenient access to other school psychologists who can offer them advice about difficult cases. To some extent, professional organizations can meet informational needs of individual school psychologists by providing names of individuals who have special expertise, or by providing a conference once or twice a year. However, this type of support, although important, seems inadequate for school psychologists who either desire or need frequent opportunities for consultation. Moreover, this support also might be insufficient for school psychologists who are either: (a) beginning their careers, (b) interested in doing