



CANADIAN

CLINICAL PSYCHOLOGIST

Newsletter of the Clinical Section of the Canadian Psychological Association
Volume 13, No. 1
October, 2002

Inside...

| | |
|---|----|
| Clinical Section Officers 2002-2003 | 2 |
| Evidence-Based Psychological Therapy Fact Sheet | 3 |
| Section 2001-2002 Annual Report | 6 |
| Self-efficacy, community violence, and adolescent dating violence | 7 |
| Posttraumatic stress disorder across traumatic events | 9 |
| Clinical Section List Serve | 11 |
| Dr. Keith Wilson: Our newest Section Fellow | 12 |
| Business of the Clinical Section | 12 |
| Innovative models of service delivery | 14 |
| Submissions Invited | 15 |
| Call for Nominations | 15 |
| A primer on virtual reality in clinical psychology | 16 |
| Call for Nominations for Section Fellows | 20 |
| Call for Nominations for Ken Bowers Student Research Award | 20 |

Message from the Chair

Many CPA members have served on the executive committee of the Section on Clinical Psychology over the past 12 years. They include Deborah Dewey, Deborah Dobson, Keith Dobson, Leslie Graff, David Hart, Paul Hewitt, Janice Howes, Charlotte Johnson, Candace Konnert, Sam Mikail, Charles Morin, Darcy Santor, Rhona Steinberg, Lorne Sexton, Michael Vallis, Alan Wilson and Keith Wilson (I apologize for any omissions). On behalf of the members, I would like to recognize and thank them for their contributions in building a strong Section that represents the interests of Clinical Psychology across Canada.

The current Executive Committee (David Dozois, Michel Dugas, Susan Graham and David Hodgins and me) met recently and has planned an active year to build on the dedication of the past executive members. I am pleased to welcome Michael Coons as the first Graduate Student Section liaison with the Clinical Section. He has already been active in contributing to the planning for the Clinical Section activities at the CPA Convention 2003.

The Section currently has a total of 544 members (including 177 student members). This represents an increase of almost 70 members since last year! Check out the freshly updated Section web site (www.cpa.ca/clinical), download the application form and send it to your colleagues. Membership in CPA and the Clinical Section makes a positive contribution to the development of the science and practice of the field in Canada and to the representation of

the profession to governments, the insurance industry and the public.

The Executive is currently updating the Clinical Psychology Brochure and the Definition of Clinical Psychology. Both of the original documents can be located on the Clinical Section web site. I would like to draw your attention to the "Training of Clinical Psychologists" section of the Definition. Some statements may need revising given the changes in the registration requirements following the Agreement on Internal Trade. For example, does the following sentence continue to describe our position? "The Section on Clinical Psychology further recommends that jurisdictions plan to require for registration that psychologists entering the profession have completed the accredited doctoral and internship programs."

Your ideas on the revision of these documents would be valuable and can be sent to kerry.mothersill@CalgaryHealthRegion.ca. Our plan is to send the revised documents to the membership and the CPA Board for approval. It has been proposed that these documents as well as information on the efficacy on psychological assessment and interventions be sent to key members of the Federal and Provincial Governments (responsible for both research and health care funding) as well as to the Insurance Industry, Health Regions, Worker's Compensation Boards, etc. Additional ideas on how the Section can enhance the stature of Clinical Psychology are also welcome.

Continued on Page 2

CLINICAL SECTION EXECUTIVE OFFICERS 2002-2003

Dr. Kerry Mothersill, Chair

Outpatient Mental Health Services,
Colonel Belcher Hospital,
1213 - 4th Street S.W.

Calgary Alberta, T2R 0X7

Phone: (403) 943-2445

Fax: (403) 943-2441

email: [Kerry.Mothersill@
CalgaryHealthRegion.ca](mailto:Kerry.Mothersill@CalgaryHealthRegion.ca)

web: [http://www.ucalgary.ca/md/CHS/nhrdb/
people/0000092.htm](http://www.ucalgary.ca/md/CHS/nhrdb/people/0000092.htm)

Dr. David Hodgins, Chair-Elect

Department of Psychology

University of Calgary

2500 University Dr. N.W.

Calgary, Alberta T2N 1N4

Phone: (403) 220-3371

Fax: (403) 282-8249

email: dhodgins@ucalgary.ca

web: [http://www.psych.ucalgary.ca/
People/Faculty/hodgins/](http://www.psych.ucalgary.ca/People/Faculty/hodgins/)

Dr. Michel Dugas, Past Chair

Department of Psychology

Concordia University,

7141 Sherbrooke St. West,

Montreal, Quebec, H4B 1R6

Phone: (514) 848-2215

Fax: (514) 848-4523

email: dugas@vax2.concordia.ca

web: [http://www-psychology.concordia.
ca/Faculty/dugas.html](http://www-psychology.concordia.ca/Faculty/dugas.html)

Dr. David Dozois, Secretary-Treasurer

Department of Psychology

University of Western Ontario

London, Ontario, CANADA

N6A 5C2

Phone: (519) 661-2111 ext. 84678

Fax: (519) 661-3961

email: dzois@uwo.ca

web: [http://www.socl.uwo.ca/psychology/
faculty/dozois.html](http://www.socl.uwo.ca/psychology/faculty/dozois.html)

Dr. Susan Graham, Member at Large

Department of Psychology

University of Calgary

2500 University Dr. N.W.

Calgary, Alberta T2N 1N4

Phone: (403) 220-7188

Fax: (403) 282-8249

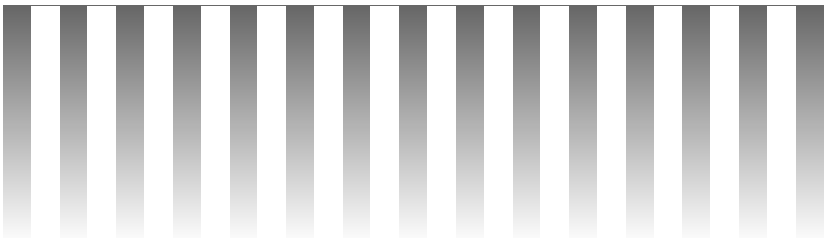
email: grahams@ucalgary.ca

web: [http://www.psych.ucalgary.ca/People/
Faculty/grahams/](http://www.psych.ucalgary.ca/People/Faculty/grahams/)

Clinical Psychology works...the data are clear. For example, John Hunsley's paper (which is posted on the CPA web site) provides an excellent summary of the cost-effectiveness of psychological interventions. The Fact Sheet from the Department of Psychology, Calgary Health Region (reprinted in this issue, starting on page 3) also provides a review for non-professionals. Please advise the Executive Committee of other reviews. The Clinical Section web site could post these documents in order to increase the awareness of efficacy data. Regrettably, we do not have the advertising budgets of pharmaceutical companies. However, we need to continue to inform health care consumers as well as decision-makers in health policy and implementation.

The Executive Committee has considered sending the Newsletter to members via our list serve. Approximately two-thirds of the membership are on the list. This would substantially decrease distribution costs. Are you in favour? If you are not on the "read only" Clinical Section list serve, please advise David Dozois (Secretary Treasurer) at ddzois@uwo.ca in order to be added (see page 11).

Kerry Mothersill, Chair



Newsletter Editors:

Dr. Deborah Dobson

Outpatient Mental Health Program,

Colonel Belcher Hospital,

1213 - 4th St. S.W.,

Calgary, Alberta, T2R 0X7

Phone: (403) 943-2461

Fax: (403) 943-2441

email: ddobson@ucalgary.ca

Dr. Keith Dobson

Department of Psychology

University of Calgary

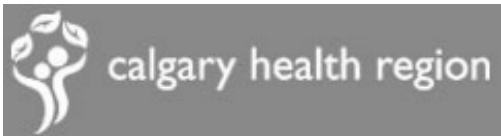
2500 University Dr. NW

Calgary, Alberta, T2N 1N4

Phone: (403) 220-5096

fax: (403) 220-5096

email: ksdobson@ucalgary.ca



Department of Psychology Clinical Support Services (Adult)

Evidence-Based Psychological Therapy Fact Sheet

You might not know it from the pharmaceutical industry's marketing and advertising juggernaut. However, medications are not always the treatments of choice for the serious health conditions that most often affect people in our community and that cost our health care systems so much money. Psychological therapy is alive and well as an efficient and cost-effective treatment for various mental *and* physical disorders. Most of the resources of health care systems and providers are directed at physical interventions for various disorders. However, psychological treatment methods, when rationally deployed, are not only effective and durable in managing health and mental health problems but may also reduce health system costs over time.

What follows is *not* an exhaustive list of psychological treatments that have proven their worth in health care. Volumes – literally – continue to be written on this topic and a complete reckoning is far beyond the scope of this Fact Sheet. However, the examples that follow provide ample evidence that psychological interventions are powerful, efficient, and cost-effective methods of care for health and mental health problems, and that they merit a central place in the care programs of the Calgary Health Region.

- ❖ Head-to-head comparisons of cognitive behavioural psychotherapy (CBT) with first- and second-generation antidepressant medications indicate that both interventions are comparably effective in the treatment of Major Depressive Disorder (Craighead, Craighead, and Ilardi, 1998). A recent study (Amsterdam et al., 2002) found that cognitive therapy was as effective as antidepressant medication in the treatment of Major Depressive Disorder and that its effects were more durable than those achieved through pharmacotherapy. In that study, the costs of psychotherapy were comparable to those of medication in the short term, and less than those of medication over longer follow-up. With depression poised to become one of the top causes of mortality, morbidity, and lost productivity worldwide in the coming years (Rosenbaum & Hylan, 1999; World Health Organization, 2001), these data become even more compelling concerning the importance of psychological interventions in its treatment.
- ❖ In-vivo exposure treatments for persons with Panic Disorder with Agoraphobia have proven effective in both short-term treatment and at follow-up. Adding cognitive therapy to the treatment package appears to enhance treatment efficacy (Barlow, Esler, & Vitali, 1998).
- ❖ Patients with Panic Disorder cost primary health care systems an inordinate amount of money (Klerman et al., 1991). Since their symptoms often mimic dangerous conditions such as myocardial infarction, coronary artery disease, and seizure disorder, they often receive repeated invasive, costly, and dangerous medical investigations when their actual condition goes unrecognized (Ballenger, 1987). The availability of safe, effective, durable, and economical psychological interventions for Panic Disorder makes this finding particularly ironic.
- ❖ Both exposure therapy combined with response prevention and cognitive therapy are as effective as medication interventions in treating persons with Obsessive-Compulsive Disorder (Abramowitz, 1997; Balkom et al., 1994, Jenike, 2001).
- ❖ Phobias (fears of specific objects or situations) are not only distressing. They may help to kill you. Men with ischemic heart disease who also have multiple phobias are at significantly increased risk of a fatal heart attack (Haines et al., 1987; Kawachi et al., 1994). In-vivo exposure and systematic desensitization are well established as effective treatments of choice for phobia (Barlow et al., 1998; Park et al., 2001).
- ❖ In 1994, the U.S. magazine *Consumer Reports* undertook the largest survey ever conducted of psychotherapy outcomes. Seven thousand readers detailed their experiences with psychotherapy for personal health and mental health difficulties. The principal findings of the survey were:
 - Almost half of the respondents characterized their emotional health as “very poor” or “poor” at the time of seeking help.
 - Respondents who pursued therapy with a family physician did well. However, those who saw a mental health professional (psychologist, psychiatrist, social worker) for more than six months did better.

Continued on page 4

- Psychotherapy worked as well as combined psychotherapy and pharmacotherapy. Most persons who took prescribed medications found them helpful. However, for many the side effects limited their ability to keep on taking the medications.
- The longer that psychotherapy lasted, the more it helped.
- ❖ A by-now-widely-known study conducted by a national managed behavioral health care corporation in Hawaii found that a program of focused, brief psychological therapy with intensive users of health care services and patients with chronic diseases (for example, COPD, diabetes, hypertension) produced improvements in patient health status, along with broad reductions in subsequent health care usage and attendant costs (medical cost offset) (Cummings, Dorken, Pallack, & Henke, 1993).
- ❖ Only a small percentage (12-25%) of health care usage is predicted by objective disability or morbidity alone (Berkanovic, Telesky, & Reeder, 1981). Kroenke & Mangelsdorff (1989) reviewed the records of over 1000 patients attending an internal medicine clinic over a three-year period. Their data indicate that in only about 15% of the cases were the patient's physical complaints of "organic" origin. Attention to the psychological and social pathways by which patients come to use health care services both improves clinical care and has the potential to produce cost-offset (Friedman, Sobel, Myers, Caudill, & Benson, 1995; Chiles, Lambert, & Hatch, 1999; Hunsley, 2002). (But see Fraser (1996) and Kaplan & Groessl (2002) for cautionary notes.)
- ❖ Smoking, obesity, and maintaining a sedentary lifestyle are epidemic and literally deadly habits worldwide and in our own community. They are the products of multiple factors ranging from basic genetics and biology to large-scale social influence via the media. They require comprehensive interventions at all levels. Psychological interventions aimed at promoting habit change and relapse prevention are essential components of all health care planning around these habit disorders (Dubbart, 2002; Niaura & Abrams, 2002; Wadden, Brownell, & Foster, 2002).
- ❖ The most powerful (medical) therapies in the world are useless if patients fail to take or use them. Getting patients to adhere to complex healthcare treatment programs and to use them to their full benefit often requires psychological intervention methods.:
 - Programs designed to help "at risk" patients change health-risky habits are highly effective (Ockene & Ockene, 1992). However, many patients fail to follow medical advice about making such changes (Burke et al., 1997).
 - In one study, only 7% of diabetic patients adhered fully to all aspects of their required treatment regimen (Cerkoney & Hart, 1980). The complications of poorly controlled diabetes are expensive in both human and fiscal terms. They include heart disease, kidney failure, blindness, and limb amputations.
 - Health Canada reports that hypertension is the number one reason that "baby boomers" (35-64 year olds) make office visits to primary care physicians. However, up to 50% of patients who require antihypertensive medication stop using their medication within the first year of prescription (Burke et al, 1997). Uncontrolled hypertension puts patients at dramatically increased risk for such costly morbid events as stroke and heart attacks.
 - Adherence to cardiovascular-risk-reducing eating plans may be as low as 13%, depending on the nature and duration of the regimen (Burke et al., 1997).
 - Individuals who report high stress in their lives and who have not learned effective coping strategies are less likely to adhere to treatment recommendations than individuals who report low stress or than those who have learned effective stress-management skills (Kurtz, 1990).
 - Barriers to cardiovascular risk reduction are not primarily biological. The most important barriers include: personal factors, family factors, health care provider and health care system factors, occupational factors, community factors, and legislation (Glasgow et al., 1999).
 - Healthcare initiatives that help individuals assess and address these barriers in their lives have a positive effect on patients' treatment adherence (Glasgow et al., 1999; Kaplan, 2000; Terris, 1999).
 - Specialized client-centered motivational interviewing methods help promote patient self-management of their health problems. These methods emphasize the importance of a collaborative therapeutic alliance between the provider and patient and empathic listening as catalysts to promote health behavior change (Miller, 2002; Miller & Rollnick, 1991).
 - People progress through different stages as they try to make changes necessary to modify health-risky habits. Treatment methods must be linked directly to the individual's stage of change to promote healthy behavior change (Prochaska, Norcross, & DiClemente, 1995).

- Evidence-based strategies for improving patient adherence include several psychological interventions, such as value clarification, changing “decisional balance”, promoting self-monitoring, behavioral skill training, family support, self-efficacy enhancement, contingency contracting, and self-management contracts (Burke et al., 1997; Lorenz et al., 1996).
- ❖ Evidence-based psychological interventions are not simply add-ons, or nice-to-have features of treatment programs for persons with chronic diseases such as cardiovascular disease and diabetes. They are central to treatment and prevention of such conditions:
 - Negative emotions contribute to increased risk of coronary heart disease and stroke. Hostility, depression, and anxiety have all been linked to increased risk of cardiac events (Rozanski et al, 1999; Hemingway & Marmot, 1999; Smith & Ruiz, 2002)
 - Stress contributes to all the major modifiable risk factors of coronary heart disease. Negative emotions help account for the onset of hypertension (Jonas et al., 1997), dyslipidemia (Hillbrand & Spitz, 1997), smoking (Gilbert, 1995), lack of exercise (King et al., 1997), binge eating in the obese (Blackman & Fitzgibbon, 1996), and poor diabetic blood sugar control (Kramer et al, 2000).
 - Targeted psychological interventions with cardiac patients reduce the risk of fatal and nonfatal cardiac events by 30% to 50% (Linden et al., 1996; Dusseldorp et al., 1999).
 - Modification of Type A characteristics, cognitive behavioral therapy (individual and group), and relaxation therapy all lead to improved prognosis in cardiac patients (Linden et al., 1996).
 - In patients with ischemic heart disease, provision of stress management therapy was associated with lower medical costs than usual care both at 2-year and 5-year follow-up (Blumenthal et al., 2002a).
 - Psychological interventions (promoting regular exercise and healthy eating) proved more effective than medication in preventing the onset of diabetes in patients diagnosed with impaired glucose tolerance (Wing, 2002).
 - Individualized stress management training for hypertensive patients helps reduce ambulatory blood pressure (Linden et al., 2001; Blumenthal et al., 2002b).

So, should we simply abandon all our medical and surgical treatment methods, and put all the fancy drugs on the back shelf of the medicine cabinet so that we can devote all our time, money, and energy to psychological treatments? Of course not. The point of these findings is that psychological interventions are powerful, efficient, and cost-effective methods of care for the costly health and mental health problems that bring people into the Calgary Health Region. They warrant a central place in the care programs of the Region.

Concentrating solely on the medical treatment of persons with these difficult health problems not only fails to address many of these chronic illnesses effectively, it also ends up costing us all a great deal more money. Many of the determinants of mortality and morbidity of the most common serious illnesses of our time are psychological. They will need behavioural and psychological solutions to complement the biological and pharmacological treatments that consume most of our resources now.

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 Clinical Support Services
 Adult Acute Care Sector
 Calgary Health Region

Editor’s Note:

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The references referred to in this article are available on the World Wide Web, at <http://www.crha-health.ab.ca/clin/adultpsy/factsheets/evidence.pdf>

SECTION ON CLINICAL PSYCHOLOGY 2001-2002 ANNUAL REPORT

Section Executive

The executive was comprised of myself (Michel Dugas), Lesley Graff as Past Chair, Kerry Mothersill as Chair-Elect, and David Dozois as Secretary-Treasurer. Although Darcy Santor began the year as Member-at-Large, he resigned his position halfway through the year. The executive had two in-person meetings, two teleconference meetings, and frequent email communications over the course of the year.

Convention Program

The section reviewed 90 submissions for the Vancouver conference. Section-sponsored activities are the following: Robert Ladouceur and Tony Toneatto will present a pre-convention workshop (gambling); John Livesley (personality traits) and Tom Borkovec (anxiety) will be our invited speakers; John Pearce (neglected children) and Robert Wilson (service delivery) will present mini-workshops; David Dozois (depression), Lisa Serbin (developmental psychopathology), and Brian Cox (gambling) will chair symposia; and William Koch (internships) and Adam Radomsky (finding a job) will chair conversation sessions.

Awards and Elections

Keith Wilson was awarded the status of Fellow of the Clinical Section. Keith was selected on the basis of his outstanding contribution to psychology in the areas of science, practice, and service. See page 12 for the notice of this award.

The executive decided to grant two student awards at the upcoming conference (in past years, we had granted only one student award). At the time of drafting this report, the student submissions were in the process of being judged.

Two positions were available on the section executive, Chair-Elect and Member-at-Large. At the time this report was drafted, one position had been filled: Susan Graham as Member-at-Large. Given that the executive had received no nominations for the position of Chair-Elect, we are currently in the process of contacting potential candidates.

Communications

The section continued to publish its biannual newsletter, Canadian Clinical Psychologist. Deborah Dobson, Keith Dobson, and David Hart have all pitched in to edit the newsletter over the past year, and the executive thanks them for their invaluable help. David Hart has also contin-

ued to do a wonderful job of overseeing our web-site.

The section has also established an electronic list-serve, which is used to communicate with members about section business. The list-serve, which is handled by David Dozois, reaches most of our members and appears to be an efficient means of communication.

Ongoing Projects

The section has many ongoing projects, and only a few will be mentioned here. We are currently in the process of updating our section brochures, which provide information on clinical psychology in Canada. Once the brochures have been updated, they will be posted on our section web-site. We also continue to play a key role in the development of the CPA fact sheets (Lesley Graff has taken over this responsibility from Darcy Santor). Finally, our new member recruitment campaign has been very productive, and we plan to send "friendly" letters to ex-members, inviting them to renew their membership in our section.

Michel J. Dugas, Ph.D.
Past-Chair, Section on Clinical Psychology

**KEN BOWERS STUDENT
RESEARCH AWARD/
PRIX KEN BOWERS
POUR RECHERCHE EFFECTUÉE
PAR UN(E) ÉTUDIANT(E)**

**The Clinical Psychology Section is
pleased to announce that two Ken
Bowers Student Awards for merito-
rious student research were made
at the 2002 CPA conference in Van-
couver.**

**Congratulations are extended to
Christine Schwatz of the University
of Victoria and Marcia Voges of the
University of Calgary.**

**Articles based on their out-
standing research are on the pages
following this.**

SELF-EFFICACY, COMMUNITY VIOLENCE, AND ADOLESCENT DATING VIOLENCE

Christine Schwartz & Marsha Runtz,
Department of Psychology, University of Victoria

Background: Researchers have discovered a number of risk factors associated with adolescent dating violence; these include child maltreatment, family violence, demographic characteristics, and high levels of conflict in teen dating relationships. However, little research has been conducted to examine the role of community violence and self-efficacy in regard to dating violence victimization and perpetration. The current study examined relationships among adolescent dating violence, family violence, community violence, dating history, academic history, and various forms of self-efficacy.

Method: Participants were 306 students (age 16 to 19; Mean = 18 years); 30% were high school students and 70% were introductory psychology students at a western Canadian university. Most participants were female (73%) and Caucasian (83%). Participants provided information regarding demographic characteristics, academic background (e.g., grades, course failures) and aspirations, dating history (e.g., dating frequency, age at first date, number of dating partners), exposure to family violence, involvement in community violence and dating violence, and a variety of forms of self-efficacy. The Revised Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy & Sugarman, 1996) was used to evaluate participants' experiences of victimization and perpetration of psychological, physical, and sexual dating violence. The original Conflict Tactics Scale was modified to provide measures of exposure to parental violence, as well as witnessing, perpetrating, and being a victim of physical violence in the community. The Physical Abuse Questionnaire (Demaré, 1992) was used to assess childhood physical maltreatment by parents. Five aspects of self-efficacy were assessed using: the Self-Efficacy Scale (general and social self-efficacy; Sherer et al., 1982); the Physical Self-Efficacy Scale (Ryckman, Robbins, Thornton, & Cantrell, 1982); the Measure of Academic Self-Efficacy (Lalonde, 1980), and the Dating Self-Efficacy Scale (DSES), which was devised for this study. The DSES assessed two areas of individuals' beliefs in their dating abilities including: *Securing and Maintaining Dating Relationships* and *Protecting Oneself from Dating Violence*.

Results: The majority of participants had experienced some form of dating violence (see Table 1). For both high school and university students, psychological aggression was the most prevalent type of dating violence. Some gender differences in rates of dating violence emerged. Significantly more young women in high school reported perpetrating major physical aggression than young men. In addition, significantly more young men in university reported perpetrating sexual coercion than young women. The majority of the variables examined proved to be a significant correlate for at least one form of dating violence. For young women in high school, being a perpetrator of community violence was correlated with physical dating violence perpetration ($r = .59, p < .001$). In regard to self-efficacy, lower dating self-efficacy was related to experiencing all three forms of dating violence victimization (psychological: $r = -.44, p < .01$; physical: $r = -.52, p < .005$; sexual: $r = -.47, p < .01$), and lower physical self-efficacy was related to sexual victimization for high school young women ($r = -.47, p < .01$). For the young men in high school, community violence experiences proved to be very important in understanding their experiences with dating violence. Being a victim of community violence was related to all forms of dating violence for these young men (range of $r = .47$ to $.65, p < .005$). Additionally, being a perpetrator of community violence was



Christine Schwartz is given the Ken Bowers Award at the 2002 CPA Conference in Vancouver by Section Chair, Dr. Kerry Mothersill.

Continued on next page

Table 1

| Type of Dating Violence | Young Women in High School | Young Men in High School | Young Women in University | Young Men in University |
|--|----------------------------|--------------------------|---------------------------|-------------------------|
| Psychological Aggression Perpetration | 94.1% | 91.9% | 84.8% | 84.8% |
| Psychological Aggression Victimization | 97.1% | 86.5% | 79.3% | 90.9% |
| Physical Aggression Perpetration | 73.5% | 50.0% | 38.7% | 38.2% |
| Physical Aggression Victimization | 70.6% | 51.4% | 32.7% | 39.4% |
| Sexual Coercion Perpetration | 42.4% | 50.0% | 15.9% | 42.4% |
| Sexual Coercion Victimization | 69.7% | 55.3% | 38.0% | 42.4% |
| Injury: Perpetrator | 23.5% | 24.3% | 7.9% | 9.1% |
| Injury: Victim | 44.1% | 35.1% | 13.4% | 9.1% |

related to all forms of dating violence perpetration (psychological: $r = .48$, $p < .005$; physical: $r = .45$, $p < .01$; sexual: $r = .58$, $p < .001$) plus sexual dating violence victimization ($r = .55$, $p < .001$). Finally, being a witness of community violence was related to psychological perpetration ($r = .47$, $p < .005$) and sexual perpetration ($r = .42$, $p < .01$). One form of self-efficacy was related to dating violence in high school males: lower academic self-efficacy was associated with psychological perpetration ($r = -.44$, $p < .01$). Experiencing community violence was related to some forms of dating for young women in university: witnessing community violence was correlated with the perpetration of both psychological ($r = .25$, $p < .001$) and physical ($r = .23$, $p < .005$) dating violence, and community violence perpetration was related to physical dating violence victimization ($r = .21$, $p < .005$). Self-efficacy was not related to dating violence for the university women. In contrast to the findings for the other participants, experiences with community violence and self-efficacy were unrelated to dating violence for young men in university.

Conclusions: This study identified a number of variables that were related to dating violence among adolescents that were previously unexamined. Specifically, experiences with community violence emerged as an important factor in understanding dating violence for high school students and for young women in university. Additionally, dating, physical, and academic self-efficacy also played a role in understanding dating violence for high school students. In terms of practical applications of these findings, dating violence intervention and prevention programs could incorporate these components. For example, in programs that highlight risk factors for involvement in dating violence, students' involvement in community violence needs to be addressed as acceptance of violence within one's peer group may support the use of violence within romantic relationships. Moreover, identifying low self-efficacy (e.g., in dating, academics, and physical competence) as a risk factor for dating violence may be useful, as might the promotion of means to strengthen these areas of functioning. Additionally, these finding may be used to help identify youth involved in dating violence. Specifically, for youth who have already been recognized for their involvement in community violence, professionals clearly need to assess for the possibility of violence in their dating relationships.

Posttraumatic Stress Disorder Across Traumatic Events: A Controlled Study of Risk and Resiliency Factors

Marcia A. Voges, M.Sc. and David M. Romney, Ph.D.
University of Calgary



Marcia Voges

Background: The most recent epidemiological study estimated that about 90% of citizens in the US are exposed to at least one traumatic event during their lives (Yehuda, 1999). Despite this high incidence, in recent years it has become evident that PTSD does not occur in everyone who is exposed to traumatic events (Yehuda, 1999). The most important predictor of PTSD is thought to be the severity of the traumatic event (Yehuda, McFarlane, & Shalev, 1998). Results of the National Comorbidity Survey indicated that traumatic events such as torture and sexual assault were associated with the highest rates of chronic PTSD, whereas lower magnitude events such as motor vehicle accidents and life-threatening illness were associated with lower rates of trauma (Kessler et al., 1999). However, even among those who are exposed to very severe traumatic events, only a certain proportion of those individuals go on to develop PTSD as a consequence (Yehuda, 1999; Yehuda, et al., 1998). Therefore, it is important to explore why some individuals who are exposed to traumatic events develop PTSD while others do not. The observation that trauma per se is not a sufficient determinant of PTSD raises the possibility that there may be particular risk and resiliency factors that account for an individual's vulnerability to develop the disorder (Yehuda & McFarlane, 1995).

Risk Factors for PTSD

In addition to severity and type of traumatic event, risk factors can be categorized in terms of the characteristics of the individual such as personality and gender as well as other factors such as age when exposed to trauma, prior mental illness, genetic factors, and neurocognitive factors (Harvey & Yehuda, 1999; Yehuda, 1999).

Multiple Risk Factors

Many studies have examined the effects of various risk factors in tandem for the development of chronic PTSD. For example, Breslau and Davis (1992) examined the characteristics of individuals with chronic PTSD and found that women were far more likely to develop chronic PTSD than men. In addition, people with a history of anxiety or affective disorder were more likely to develop chronic PTSD than non-chronic PTSD. Other studies have found that exposure to grotesque death, the feeling that one's life was threatened, less social support, exposure to previous trauma and family history of psychopathology predicted PTSD (Davidson & Smith, 1990; Green, Grace, Lindy, Gleser, & Leonard, 1990).

Control Groups

Although much effort has been directed towards identifying risk factors for developing PTSD, the majority of studies have either failed to include control groups or have not considered the severity of the traumatic event as an important factor. The absence of a control group in previous studies must be considered a serious methodological flaw because one cannot conclude from these studies that the alleged risk factors found so far in PTSD patients would not have occurred equally amongst controls.

Method

Participants and Procedure

A total of 52 participants were recruited through the media. In order to explore risk and resiliency factors in the development of PTSD, 25 people who experienced a traumatic event and developed PTSD were compared with a control group of 27 individuals exposed to trauma who did not develop PTSD.

Measures

The Posttraumatic Stress Diagnostic Scale (PDS; Foa, 1995), a self-report measure, was used to aid in making the diagnosis of PTSD. Coping style was assessed with the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1999). The State-Trait Anxiety Inventory (STAI; Spielberger, 1983) was used to obtain a measure of the degree of stress or anxiety experienced at the time of the traumatic event.

Continued on next page.

Participants were asked to answer the inventory in terms of how they felt *during their traumatic event*. Finally, an *ad hoc* questionnaire was administered to assess the following risk and resiliency factors previously identified in the literature: gender, prior traumatization such as childhood sexual and/or physical abuse, personal history of psychopathology, familial history of psychopathology, early separation from parents (defined as being brought up by someone other than one's parents for a period of four months or more before age 16), attribution of responsibility – how much responsibility from (100% to 0%) they felt they had themselves for the traumatic event and how much responsibility they felt someone else had, objective severity of the trauma which was assessed by having participants rate on a 4-point scale six questions based on generic stressor dimensions (Green, 1990), and finally, social support (three questions).

Results: Of the 52 participants who had been exposed to traumatic events, 48% met DSM-IV criteria for PTSD and 52% did not. As for the types of trauma reported, in descending order of frequency they were: physical assault (14); accident (10); sexual assault (9); combat (5); sudden death of family member (4); suicide of family member (4); and life threatening illness (3). A higher proportion of females (76%) developed PTSD than males (24%), $P^2(1, N = 52) = 5.37, p = .02$. The main results of the study which were analyzed using logistic regression suggested that gender and the extent to which participants felt their lives were in danger reliably predicted PTSD: $\beta = 2.20, p < .05$ and $\beta = 2.04, p < .05$ respectively. Females were 7.6 times more likely to have PTSD than males and a one-unit increase in the extent to which participants felt their life was in danger multiplied the odds of having PTSD 1.7 times. Prediction success was above chance with 72% of participants with PTSD correctly classified as having the disorder and 82% of participants without PTSD correctly classified as not having the disorder, for an overall success rate of 77%.

Discussion: The purpose of the present study was to explore risk and resiliency factors in the development of PTSD by comparing those individuals who were exposed to a traumatic event and developed PTSD with a control group of individuals similarly exposed to trauma who did not develop the disorder. The results of the chi-square analyses revealed that there was no relationship between PTSD and the following variables: history of trauma; history of physical abuse; personal or family history of mental illness; the need for hospitalization following trauma; physical injuries; exposure to severe injury or death; anxiety in response to the trauma; obtaining professional support, attribution of responsibility; or coping strategies. It is possible that the present study lacked sufficient power to detect group differences on these variables. However, as the great majority of studies citing support for these variables as predictors of PTSD did not include control groups, it is equally possible that these variables are not salient predictors of PTSD.

The finding of a sex difference in the development of PTSD is supported by previous studies which have documented a higher prevalence of PTSD in females than males (e.g., Breslau, Davis, Andreski, Peterson, & Schultz, 1997). The inclusion of a control group in the present study fosters greater confidence in the conclusion that being female is a significant risk factor for the development of PTSD. To date there is no consensus regarding an explanation for the higher rates of PTSD in women than in men. Research continues to find higher prevalence rates of the disorder in women and suggests that being female is a strong predictor of developing PTSD. This area of study has not received much research attention and clearly, the sex differences in PTSD warrants further investigation, specifically in the area of attempting to uncover the reasons for women's greater vulnerability to the disorder.

Severity of the traumatic event is thought to be one of the most salient predictors of PTSD (Yehuda, 1999). However, currently no standardized measure of trauma severity is available and, consequently, Green (1990) highlighted eight generic stressor dimensions hypothesized to cut across different types of traumatic events. One of these stressor dimensions is threat to one's life or bodily integrity. The present study found support for this stressor dimension as those with PTSD felt that their life was in greater danger than those without PTSD. The present finding is supported by Green et al. (1990) who found that life-threatening combat experience was a significant predictor of PTSD in a group of Vietnam Veterans.

The logistic regression analysis indicated that having a prior history of sexual abuse, whether or not someone to talk to about the traumatic event was available, and whether the traumatic event was the result of a deliberate act were not significant predictors of PTSD. As logistic regression demands a large sample size, it is possible that the present study lacked sufficient power to detect group differences on these variables. However, it is equally possible that these variables are not reliably predictive of PTSD. Future research examining multiple risk and resiliency factors using larger sample sizes and control groups is warranted and would help clarify the research on predictors of PTSD.

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Clinical Section List Serve

The CPA Section on Clinical Psychology initiated its list server, in August 2001, in order to inform members about important news and events, and to disseminate information generated from the Executive of the Section. Two mailouts have been sent to Section members, and we expect that there will be a total of 5 or 6 mailouts per year.

It is not the Executive's intention to use the list server as an open forum for discussion nor to advertise on behalf of members of the Section. The list server will simply be used for Section news. We intend to operate in the best interests of our members, and your email addresses will be protected and kept completely confidential.

Every member of the Section (who provided CPA

with their email addresses) were placed automatically on the list server. Ideally, we will have all Section members active on the list server. If you have not already received information through the list server, please send your email address to Dr. David Dozois at ddozois@uwo.ca, and type "Subscribe" in the subject heading (please ensure that your email address is correct). To access information about the listserver, type <http://lists.cpa.ca/mailman/listinfo/cpa>.

The Executive Committee of the Section on Clinical Psychology anticipates that the list server will be an effective means of communicating with its members and we hope that you will take this opportunity to join the list. We would again like to acknowledge CPA for its generous support in providing this service at no cost to the section.



**The Section on Clinical Psychology
welcomes its latest Fellow:
Dr. Keith Wilson**

Keith Wilson, Ph.D. obtained his doctoral training within the behavioural medicine stream of the Clinical Psychology program at the State University of New York at Buffalo. Following the completion of his internship at the Department of Psychiatry, University of Manitoba, he stayed on as a faculty member of that department for the next six years. In that position, Keith served primarily in a research capacity, as a consultant to clinicians who were developing research projects. Through this work, he developed interests in the epidemiology of anxiety and depression, cognitive-behaviour therapy and psychosocial oncology. In 1991, Keith moved to Ottawa where he took a position as a psychologist at the Rehabilitation Centre. As a true scientist-practitioner, his time is split between clinical practice and research. His clinical work is with the Terry Fox Mobile Clinic, an interdisciplinary rehabilitation outreach team that provides consultation and educational services to rural communities in eastern and northern Ontario. Keith's role is to provide

psychological and cognitive assessments for people with physical disabilities as well as inservice education for rural health professionals. He also does program evaluation for the team. His research interests fall within two broad domains—rehabilitation for chronic nonmalignant pain and the psychological aspects of end-of-life care. Within the first domain, he has been working on the topics of depression and insomnia. In the second domain, he has been conducting research into the epidemiology of depressive disorders in palliative care and also investigating the attitudes of terminally ill individuals toward the controversial end-of-life practices of euthanasia and physician-assisted suicide. He is the principal investigator of the Canadian National Palliative Care survey, an ongoing multicentre study of the end-of-life concerns of people who are nearing death from cancer. This survey is funded by the CIHR. Academically, Keith is an associate professor in the Department of Medicine and the School of Psychology at the University of Ottawa. He is a member of the Institute for Rehabilitation Research and Development of the Rehabilitation Centre, the University of Ottawa Institute of Palliative Care and the Clinical Epidemiology Unit of the Ottawa Hospital Research Institute. Keith has published over 40 journal articles and book chapters, and is a co-author (with Shawn Currie) of a recent self-help book for the cognitive-behavioural treatment of insomnia. Keith was a member of the Clinical Section executive from 1996 to 1998, serving as its' chair for the 1996-1997 term.

The Business of the Clinical Section: Summary of Executive Meetings

Winter Meeting, Montreal: January 26, 2002

Financial

- GICs are all maturing within the next few months; executive will reinvest 2 of the 3 GICs, using a guide of 50% of annual operating expenditures in investments
- Financial planning guided by concurrent discussion of section's strategic directions, including support of students, education for members through improved programming at convention, and support for advocacy/lobbying efforts for psychological services

Communications

- List server – still about 1/3 of members not on list server; request to members via newsletter to provide email address to section if have one; executive identified that likely underutilizing list server; plan more regular updates to members
- Newsletter – excellent job by new editors Deborah and Keith Wilson; David Hart to serve as guest editor for spring; executive considering moving to electronic distribution of newsletter over next few years once most members on list server

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Website

Time to update look and organization of website; may hire student to do so, obtain ideas from other sites.

CPA Convention

- Executive were congratulated on successful recruitment of presenters including John Livesley as a conference keynote speaker
- Submission rates were down by about 24%; impact of new submission requirements was discussed and various concerns raised; feedback to be solicited from reviewers to determine use and value of required summary; feedback to be provided to Convention Chair.
- Plan to advertise preconvention workshop (Gambling – R. Ladouceur) in local newspaper after early registration, allowing CPA members first opportunity to register; will approach 1-2 local section members to assist in further advertising workshop among local mental health professionals
- Preconvention workshop fees re-examined; concern that too high given other costs of attending conference; reduced fee schedule proposed for implementation for 2003 conference; section member rebates to be provided for 2002 preconvention workshop as it is past deadline to include planned member discount in 2002 fees

Section Activities

- Students with clinical research submissions to the conference will be invited to apply for the section student awards
- Discussed clinical student representation on executive – one year term, advisory role, recruit from Section on Students
- Darcy Santor, Member-at-Large regretfully resigned his position due to a heavy workload; executive will assume his responsibilities for the 5 month interim

Section Projects

- Clinical Psychologist brochure still to be updated; plan to complete that over next few months
- No new fact sheets have been put on the CPA website for several months; executive to follow up
- Feedback to national reorganization steering committee pending; report to formally communicate support and provide initial response to consultation questions to be completed prior to February CPA board meeting
- Charter of Rights for Psychologist now before the CPA Board, who are considering adopting it as a national policy statement, with revisions

Executive noted the excellent lobbying done by CPA re: Romanow Commission; decided against making a separate presentation through the public forum

Teleconference: April 19, 2002

Financial

- Current balance \$7000; two GICs matured and reinvested at 1 + 1 interest option

CPA 2002 conference

- Introductions for speakers confirmed
- Low enrolment to date for preconvention workshop; will arrange for local advertising to broader nonpsychology audience; investigate costs of newspaper ad; send out list serve information on workshop to section members; rebate cheques to member attendees will be distributed at workshop or mailed out right after conference

Section Activities

- nomination confirmed for member-at-large; executive to follow up with potential nominees for chair elect
- submissions for student awards being reviewed; nominee for fellow also discussed

Section Projects

- clinical psychology brochure has been reviewed; revised draft to be considered at June meeting
- section list serve has added a few more email addresses of members, so just over 2/3 of membership connected; no one has unsubscribed from the list serve; executive continues to carefully review requests for message distribution; will re-consider guidelines for disseminating information at June meeting
- fact sheet project to be followed up by past-chair; potential authors will be re-contacted by letter; CPA continues to be highly supportive and reported positive feedback from clinicians and the public regarding fact sheets currently on

Innovative models of service delivery in psychology

Robert F. Wilson & Marie-Helene Pelletier

Several forms of treatment for psychological disorders have been empirically supported. The traditional mode of delivery of services has required the therapist to meet with the client face-to-face. When travel is involved, this procedure can be time consuming, and consequently the cost may be prohibitive for many. The number of professionals trained to treat specific populations is limited, and the availability of treatment is often restricted to large metropolitan areas. Therefore, there is a need for both altered methods of delivery and improved access.

Technologies, such as telephone, email, and videoconferencing, have been seen as a solution to access problems and web-based e-learning programs as an alternative method of delivery. Collectively these are referred to as forms of telehealth. Telehealth is a term that refers to the practice of health care (e.g., diagnosis, consultation, treatment, and education) using technology (e.g., telephone, email, virtual reality, videoconferencing or web-based e-learning). Several factors need attention when considering the use of such technologies to provide psychological services, including: clinical issues, client acceptance, client satisfaction, comfort with the medium, confidentiality, ethical and legal problems, costs, and organizational issues. The present summary focuses on the clinical issues involved in the use of technology to provide psychological services, more specifically email, videoconferencing, and web-based interactive programs.

When looking for literature about psychotherapy via email on professional data bases such as PsycInfo and Medline, it becomes quickly apparent that there is a dearth of research in this area. Most articles review issues related to such activity, such as risks (e.g., liability, confidentiality, identity of the client) and benefits (e.g., access, costs, focus). Other publications report the use of email as an adjunct to face-to-face treatment. In those situations, email is considered "minimal therapist contact." Only a small proportion of articles provide data about treatment provided via videoconferencing. As research-practitioners involved in telehealth, we believe it is crucial to gather data and build a literature about this method of treatment.

Psychotherapy via videoconferencing refers to transmission and display of moving images and sound in real time. In other words, it is a form of interactive television. Technically, it can involve room-based systems (conventional television technology), or desktop-based systems (digital technology). In both cases, the equipment requires each site to have a television or computer monitor, a camera (usually attached to the top of the monitor), and a microphone and speaker. Early studies looking at psychotherapy delivered via videoconferencing focused on acceptance, comfort, feasibility, and anecdotal information. Research so far supports the feasibility and potential efficacy of treatment provided via videoconferencing for some specific conditions (i.e., adult suffering from mixed anxiety and depression, Manchanda & McLaren, 1998; epileptic adolescents presenting with at-risk or problematic behavior, Hufford et al., 1999).

Most recently, Pelletier (2002) conducted a treatment study of cognitive-behavioral therapy efficacy via videoconferencing for social anxiety disorder. The treatment provided was Heimberg's (2001) manualized treatment, and the two videoconferencing locations were the University of British Columbia Telestudios and the UBC Mental Health Evaluation and Community Consultation Unit. Standardized outcome measures were used, and visual and statistical analyses and clinical significance were reported. The results revealed that there was some support for the efficacy of this form of treatment for socially anxious individuals.

We have just begun to evaluate the effectiveness of a series of interactive e-learning courses delivered to a clinical population over the internet. Samples of these courses were presented in our presentation and are available for review at www.wilsonbanwell.com. It is our view that there is growing importance for practitioners to keep up to date with the telehealth literature and to collaborate with researchers, so that our clients will benefit from enhanced access to treatment as well as increased modes of delivery.

Note: This is a summary of an invited presentation at the Canadian Psychological Association convention, Vancouver, BC, 2002. Further information regarding this topic as well as access to e-learning courseware may be obtained by contacting the senior author at rwilson@wilsonbanwell.com.

Call for Nominations Officers of the Clinical Section



An easy, but meaningful way , that you can show your support for the Clinical Section is to participate in the election process.

For 2003-2004, the Section requires nominations for the position of Chair-Elect (a three-year term, rotating through Chair and Past Chair) and Secretary-Treasurer (a two-year term). Continuing members of the Executive for 2003-2004 will be:

Dr. David Hodgins (Chair),
Dr. Kerry Mothersill (Past-Chair) and
Dr. Susan Graham (Member-at-Large).

Although there is no requirement for the following, the Section does support equitable geographical representation and gender balance on the executive.

Nominations shall include:

- (a) a statement from the nominee confirming his/her willingness to stand for office, and
- (b) a letter of nomination signed by at least two members or Fellows of the Clinical Section.

Deadline for receipt of nominations is March 28th, 2003. Send nominations for the Executive to:

Dr. Michel Dugas, Past Chair
Department of Psychology/CRDH (PY-170)
Concordia University
7141 Sherbrooke St. West
Montreal, Quebec H4B 1R6

Phone: (514) 848-2215
Fax: (514) 848-4537
email: dugas@vax2.concordia.ca

Submissions Invited

This newsletter, the Canadian Clinical Psychologist/ Psychologue Clinicien Canadien invites submissions from Section members and students.

Brief articles, conference or symposia overviews, and opinion pieces, are all welcome. The thoughts and views of contributors belong strictly to the author(s), and do not necessarily reflect the position of the Section, the Canadian Psychological Association, or any of its officers or directors.

Please send your submission, in English or

French, directly to the editors, preferably either on disk or via e-mail attachment to either of the editors.

The newsletter is published twice per year. Submission deadlines are as follows: September 15th (October issue) and March 15th (April issue).

Editors:

Deborah & Keith Dobson

ddobson@ucalgary.ca
ksdobson@ucalgary.ca

A primer on virtual reality in clinical psychology, with illustrations for the treatment of anxiety disorders

Stéphane Bouchard, Ph.D.
Cyberpsychology Lab
Université du Québec en Outaouais
Centre Hospitalier Pierre-Janet

Virtual reality (VR) is an application that lets users navigate and interact in real time with a three-dimensional computer-generated environment (Pratt, Zyda, & Kelleher, 1995). VR has been around for decades and used extensively for training purposes (e.g., pilots), to reproduce environments for a variety of educational or entertainment purposes (e.g., museums,) or for engineering and design purposes (e.g., design planes). However, it only became affordable and useful for clinical psychologist in the last few years, mostly due to decreases in equipment costs and the increasing possibility to use it on Windows-based computers.

VR offers many opportunities for clinical psychologists. Anybody who needs to recreate standard environments or situations could consider VR as a fruitful option. Its usefulness is currently been studied in research labs working on eating disorders (e.g., Riva, Bacchetta, Baruffi & Molinari, 2001), attention deficit disorders (e.g., Rizzo et al., 2000), autism (e.g., Strickland, Marcus, Mesibov, & Hogan, 1995), teaching street crossing to children (McCommas et al., 1998), pain management (Hoffman, Patterson, Carrougher, & Sharar, 2001), cognitive rehabilitation (e.g., Rizzo et al., 1998) and the assessment of sexual preferences (Renaud, Rouleau, Granger, Barsetti, & Bouchard, 2002), to name only a few.

Using VR to conduct exposure in the treatment of anxiety disorders is one of the earliest and most popular applications of VR in the treatment of mental disorders. In 1995, a research team lead by Barbara Rothbaum and Max North in Atlanta published four empirical papers documenting the use of "in VR" exposure with phobias. The first two comparative control trials of *in VR* versus *in vivo* exposure were published in 2000 by Rothbaum, Hodges, Smith, Lee and Price for the fear of flying and in 2002 by Emmelkamp, Hulsbosch, de Vries, Schuemie and van der Mast on the fear of heights. In the Rothbaum et al. study, 49 adults with a fear of flying were randomly assigned to either a waiting

list, four sessions of anxiety management training plus four sessions of *in VR* exposure (sitting on a plane, take-off, landing, thunderstorm, etc.), or four sessions of anxiety management plus four sessions of *in vivo* exposure (ticketing, boarding and spending time in a stationary airplane) and imaginal exposure (imagining take-off while sitting in the stationary airplane). Both treatment conditions were statistically superior to the waiting list and not statistically different from one another. By the 6-month follow-up, 93% of the participants in each treatment condition had flown at least once. The Emmelkamp et al. (2002) study also confirms the effectiveness of *in VR* compared to *in vivo* exposure. Their study is based on 33 patients suffering from acrophobia and exposed to a virtual environment that is a very close copy of the physical environment.

Before considering VR, psychologists should be aware of basic technical and practical issues. Creating and using virtual environments is possible with four different technologies: (a) computer monitors, (b) projective desks, (c) head mounted displays (HMD) and (d) immersive chambers. Traditional computer monitors could be used to recreate and interact with artificial environments. The combination of many screens or monitors could provide a stronger immersive experience. It offers the advantage of being the least expensive virtual experience. It is commonly found in the use of popular 3D computer games such as flight simulators or first-person shooter. Some people could experience strong emotional reactions while playing these games. Behaviors and cognitions could be learned, studied or even changed using that technology. However, it could hardly be considered virtual reality when compared with other technologies, especially HMD and immersive chambers.

A second VR technology often used in engineering and computer modeling is projective desks. With a projective desk, the user wears a pair of glasses that provide a 3D effect for images that are computer generated and projected on a desk. The user can move virtual objects or change his perspective using a mouse, a joystick or a motion tracker. With the projective desk, the user gets a strong impression of three dimensions and of being able to manipulate objects. One example of clinical psychologists using this technology is for studying depth perception and mental rotation tasks (Rizzo et al., 1998).

Continued on page 17

Head mounted displays consist essentially of a pair of goggles with small computer monitors mounted in front of each eye. An additional and essential device is a motion tracker transmitting information to a computer on the position and movements of the head. With this equipment, a user immersed in a 3D computer generated environment has the impression of being in a virtual world where the environment changes according to his head movements. Additional devices could allow the user to move and explore the virtual environments (e.g., additional trackers, joystick, mouse), to feel force feedback or interact using the sense of touch (i.e., haptic devices), to benefit from stronger 3D impressions (by using stereoscopic images) or to enjoy 3D sounds. The advantages of HMD systems are their affordable costs and the fact that they can work on standard PC computers.



The last type of VR technology is the immersive chamber, often called by the name CAVE[®] (for CAVE Automated Virtual Environment). The typical immersive chamber system consists of images projected simultaneously on three walls and a floor, a pair of glasses providing a 3D stereoscopic effect and a motion tracker or a joystick. The advantages of this technology are also the source of its limitations. The user is immersed in a large space, with a wide field of view, controlled by particularly powerful computers. The equipment, physical space and computer science expertise required to use immersive chamber is currently a significant deterrent to the widespread dissemination of this technology from the research labs to the clinicians' office.

A core concept in the field of VR is the sense of presence. The potential to induce powerful emotional responses by immersions in virtual reality is thought to be related to the sense of presence. Presence is intuitively defined as the subjective

sense of "being there" in the virtual environment. Researchers agree on that simplistic definition, although much debate remains about the exact nature of presence. Some insist on the contrast between "arriving" into the virtual environment and "departing" from the physical one (Kim & Biocca, 1997), others insist on forgetting that the experience is computer generated (the illusion of non-mediation, Lombart & Dyton, 1997) and others propose sub-types of presence (e.g., Heeter, 1992). It is believed that a subjective sense of presence allows the user to think, feel and behave as if they were in the physical reality. Given a sufficient sense of presence, the virtual environments do not have to be perfect and realistic reproductions of reality. For example, individuals with phobias could show marked increases in anxiety, sometimes up to a full blown panic attack, when confronted with simple virtual stimuli (North, North, & Coble, 1996).

An important issue to be aware of is the side effects of VR. Immersion in virtual environments, especially with HMD and immersive chambers, could cause cybersickness and after-effects. Cybersickness could be related either directly to the equipment (e.g. heavy HMD causing neck strain or looking at TV monitors for a long period of time inducing eye strain), or to conflict between sensory information. The equipment issue becomes less and less of a problem given the fast pace of technological advances. For example, HMDs now offers a 800 X 600 resolution and weight less than seven ounces. The conflicts between sensory information are still an important issue in VR. Take the example where a person with acrophobia (fear of heights) is immersed in VR with a HMD. When he turns his head around, he can contemplate the scenery. If he looks down he can see the depths of the cliff, and by pressing a mouse button with a finger he can walk forward towards the edges of the cliff. When that user "walks" in the virtual environment, the visual system signals movement, while part of the vestibular and the proprioceptive systems do not detect forward motion. When the user turns his head around, the vestibular system immediately detects motion, but there is a small lag in time while the computer processes the information and the corresponding visual stimuli are displayed. These incongruities between the sensory systems could cause symptoms of nausea, vertigo, headache, blurred vision, etc. Finally, looking down a virtual cliff could induce vertigo. While the first two examples of cybersickness are related to motion sickness, the last one is natural in the sense that it is

Continued on page 18

not caused by VR per se, but is a normal reaction in some people when they perform the same behavior in the physical world. Any symptoms of cybersickness are usually transient, not severe, not dangerous and often disappear during the immersion in VR. But it may not be the case for all users (Stanney, 2002), and some people may be more sensitive than others. For people who remain in virtual environments for a long period of time, their sensory systems could adapt to VR. When immersion is stopped, after-effects could also occur, such as loss of balance and nausea, until the sensory systems readapt to the physical reality. Hence, VR should be used by professionals aware of these effects and who are following some established safety protocol (Stanney, 2002).

Despite the slight potential problems associated with VR, it offers many advantages to psychologists treating anxiety disorders. Effective treatment of anxiety disorders usually involves some kind of exposure to the feared stimuli. *In VR* exposure gives the therapist total control over the situation. For example, in the treatment of the fear of flying, the therapist can control the occurrence and intensity of turbulences and the duration of the flights. Such control is difficult with phobias such as thunderstorms, tornados or wind. Using VR could also be safer, notably in the case of exposure to heights or for driving cars. Conducting *in vivo* exposure could sometime cause confidentiality problems, such as when accompanying the patient to phobic places or situations (e.g., fear of flying, acrophobia), which is not a problem with *in VR* exposure. During any exposure session, a key task of the therapist is to monitor and reduce avoidance as much as possible. Given that *in VR* exposure is highly standardized, conducted in the privacy and comfort of the therapists' office, and that the therapist sees on the computers screen the same thing as the patient, it is much easier to detect subtle avoidance behaviors such as looking for reassuring cues in the environment or crossing fingers for good luck. *In VR* exposure also allows the patient to go over the exact same situation over and over again, or to go far beyond what they could try during *in vivo* sessions (e.g., an acrophobic walking on the metal beams of the highest floor in a skyscraper under construction). For the therapist who treats animal of insect phobias, the need to care for the pets is also eliminated. For some situations like fear of flying, it is much cheaper than having to pay for a real flight. Finally, it is more enticing for patients (Garcia-

Palacios, Hoffman, See, Tsai, & Botella, 2001).

The research team at the Cyberpsychology Lab at the University of Quebec in Outaouais has been conducting studies on VR for anxiety disorders, among many other applications. Recently, a sample of 22 phobic adult patients was enrolled in an outcome study on phobias. Immersion was provided with a Pentium III PC computer (866 MHz), a Radeon 64 graphics card by ATI, an I-Glass HMD by I-O Display (resolution of 640 X 480), an Intretrax² tracker by Intersense and a joystick. The price of the equipment was about \$5000 (Cdn) when bought in 2000. The VR environments were created by adapting 3D games and were functioning on Windows 98. The treatment consists of four sessions of 90 minutes each. The first treatment sessions was centered on transmission of information about phobias, the treatment, *in VR* exposure and cybersickness. The following three sessions were devoted to *in VR* exposure, with the exception of the last 15 minutes of the final session that addressed relapse prevention. No homework was given. Preliminary analyses on simple pre to post comparisons show a significant improvement on the Fear Questionnaire [$F(1,21) = 4.6, p < .05$] and in self-efficacy to face the feared stimuli [$F(1,21) = 13.1, p < .01$]. After five minutes of immersion, participants were asked to rate on a 0 to 100 scale the realism of the environments (mean = 64.2 %, s.d. = 18.7), the level of fear (mean = 59.9 %, s.d. = 12.1) and the subjective sense of presence (mean = 68.1, s.d. = 18.3). More thorough studies are underway on the measurement and determinants of presence, on the comparison between reactions of people with phobia versus those without phobias, on the effectiveness of *in VR* exposure for adults and children and on the treatment mechanism of *in VR* exposure.

In summary, it appears that virtual reality is more than a science-fiction toy for computer engineers. It offers many opportunities for clinical psychologists, not only for the treatment of anxiety disorders, but for many other clinical situations where standardized or controlled environments are useful. VR should not be used carelessly, as it can cause side effects, which are usually of no consequences if managed adequately and the patient is informed *a priori*. Clinical trials are being conducted in Canada and other countries to document the effectiveness of treatments involving VR and compare it to more traditional treatments.

Continued on page 19

Suggested readings :

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MISES EN CANDIDATURE - FELLOWS DE SECTION

Conformément aux procédures régissant les sections de la SCP, la section clinique invite ses membres à présenter des candidats pour le statut de Fellow en psychologie clinique. Les critères de sélection sont la contribution exceptionnelle au développement, au maintien et à l'accroissement de l'excellence dans la pratique scientifique ou professionnelle de la psychologie clinique. En guise d'exemples: (1) création et évaluation de programmes novateurs; (2) services rendus aux organismes professionnels de niveau national, provincial ou régional; (3) leadership dans l'établissement de rapports entre la psychologie clinique et les problèmes sociaux de plus grande envergure; et (4) services rendus à la communauté en dehors de son propre milieu de travail. À ces fins, les contributions cliniques et les contributions en recherche seront considérées comme étant équivalentes. Les dossiers des candidats seront examinés par le comité exécutif. Les mises en candidature doivent être appuyées par au moins trois membres ou Fellow de la Section et la contribution du candidat à la psychologie clinique doit y être documentée. Les mises en candidature devront être postées au plus tard le 28 mars 2003 à l'attention de:

Dr. David Hodgins, Chair-Elect

Department of Psychology
University of Calgary
2500 University Dr. N.W.
Calgary, Alberta T2N 1N4
Phone: (403) 220-3371
Fax: (403) 282-8249

CALL FOR NOMINATIONS- SECTION FELLOWS

In accordance with the by-laws for CPA sections, the Clinical section calls for nominations from its members for Fellows in Clinical Psychology. Criteria for fellowship are outstanding contribution to the development, maintenance and growth of excellence in the science or profession of clinical psychology. Some examples are: (1) creation and documentation of innovative programs; (2) service to professional organizations at the national, provincial or local level, (3) leadership on clinical issues that relate to broad social issues; and (4) service outside one's own place of work. Note that clinical contributions should be equated with research contributions. In order for nominees to be considered for Fellow status by the executive council, nominations must be endorsed by at least three members or Fellows of the Section, and supportive evidence of the nominee's contribution to clinical psychology must accompany the nomination. Nominations should be forwarded by March 28, 2003 to:

Dr. David Hodgins, Chair-Elect

Department of Psychology
University of Calgary
2500 University Dr. N.W.
Calgary, Alberta T2N 1N4
Phone: (403) 220-3371
Fax: (403) 282-8249

**KEN BOWERS
STUDENT RESEARCH AWARD**

Each year, the Section of Clinical Psychology reviews papers that have been submitted by clinical students for presentation at the annual CPA convention. The most meritorious submission is recognized with a certificate and an award of \$300. In order to be eligible, you should: (1) Be the first author of a submission in the area of clinical psychology that has been accepted for presentation in Hamilton; (2) Submit a brief (i.e. up to 10 pages, double-spaced) manuscript in APA format describing the project, and (3) Be prepared to attend the Clinical Section Business meeting at the Hamilton convention, where the award will be presented.

The deadline for submission of applications is March 28, 2003. Submissions may be in either English or French and should be forwarded to:

Dr. David Hodgins, Chair-Elect

Department of Psychology
University of Calgary
2500 University Dr. N.W.
Calgary, Alberta T2N 1N4
Phone: (403) 220-3371
Fax: (403) 282-8249
email: dhodgins@ucalgary.ca

**PRIX KEN BOWERS POUR RECHERCHE EFFECTUÉE
PAR UN(E) ÉTUDIANT(E)**

Chaque année, la Section de Psychologie Clinique évalue les communications soumises par les étudiants(es) en vue d'une présentation au congrès annuel de la SCP. En 2003, deux bourses seront remises. Un certificat et une bourse de 300\$ seront remis aux deux étudiants(es) ayant soumis les communications les plus méritoires. Pour être admissible, l'étudiant(e) doit: (1) être premier(ère) auteur(e) d'une communication touchant le domaine de la psychologie clinique ayant été acceptée pour le congrès de Hamilton; (2) soumettre un résumé de 10 pages à double interligne décrivant l'étude; et (3) être présent(e) à la réunion d'affaires de la Section Clinique du congrès de Hamilton lorsque les prix seront décernés.

La date limite pour soumettre les candidatures est le 28 mars, 2003.

Les demandes peuvent être formulées en français ou en anglais et doivent être envoyées à:

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