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*University of Manitoba  
Applied Health Sciences Research Event  
Tuesday, April 12, 2016  
Cibinel Board Room, Active Living Centre*

Student Presentation  
Abstracts

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**INTIMATE PARTNER VIOLENCE (IPV) IN CANADA: RATES, RISK FACTORS, AND ASSOCIATED HEALTH OUTCOMES**

*Margherita Cameranesi, University of Manitoba*

Intimate partner violence (IPV) is the most prevalent form of violence in Canada. Most research on the effects of IPV has been limited to small samples of female survivors of IPV recruited either from the community or from shelters, thereby reducing the generalizability of results. The goal of the present study is to address these generalizability issues by conducting a secondary analysis of a population-based phone survey. Two consecutive cycles of the Canadian General Social Survey (GSS) will be analyzed with the two main objectives of: 1) describing age and sex changes in rates of self-reported emotional, financial, physical, and sexual IPV victimization from 2004 and 2009; and 2) investigating differing risk factors by age and sex for IPV victimization and associated physical and mental health outcomes. The GSS is an ongoing quinquennial national-level survey with a repeated cross-sectional design and a multi-stage probability sampling procedure designed to recruit participants representative of the Canadian population. From 2004 to 2009, each sample included more than 20,000 participants, evenly distributed by sex and age group (15-35 years, 36-55 years, and 55 years and over). Results of multiple logistic regression analyses will be discussed within the frameworks of the social determinants of health and the life course health perspective.

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## **PREOPERATIVE PHYSICAL ACTIVITY BEHAVIOR, BUT NOT DEPRESSIVE SYMPTOMS, IMPACTS ONE-YEAR RE-HOSPITALIZATION AND MORTALITY IN ADULT CARDIAC SURGERY PATIENTS.**

**D. Scott Kehler**,<sup>1,2</sup> Andrew N. Stammers,<sup>1,2</sup> David Horne,<sup>3</sup> Brett Hiebert,<sup>4</sup> George Kaoukis,<sup>5</sup> Rakesh C. Arora,<sup>4</sup> and Todd A. Duhamel<sup>1,2,6</sup>

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**Disclosure:** R.C. Arora has received an unrestricted educational grant from Pfizer Canada Inc. for this work.

**Objectives:** To investigate whether physical activity and depressive symptoms prior to cardiac surgery are associated with the: 1) composite outcome of one-year re-hospitalization and mortality, and 2) costs of cardiac surgery and one-year re-hospitalization postoperatively.

**Methods:** Four-hundred and five elective and in-house urgent cardiac surgery patients were analyzed ((median age: 65 [interquartile range: 57-71])). Physical activity was assessed with the short-form International Physical Activity Questionnaire and participants were categorized as “inactive” if they accumulated <600 MET-min/week. The Patient Health Questionnaire-9 was used to evaluate preoperative depressive symptoms and categorize patients as “depressed” and “not depressed” Patients were separated into four groups: 1) Not depressed/active (n=209), 2) Depressed/active (n=48), 3) Not depressed/inactive (n=101), and 4) Depressed/inactive (n=47). Manitoba Centre for Health Policy administrative data and vital statistics were used to capture the composite outcome of re-hospitalization and mortality at one-year, as well as estimated costs due to cardiac surgery and one-year re-hospitalization.

**Results:** Freedom from the composite outcome were 76.1%, 87.5%, 68.0%, and 61.7% in the Not depressed/active, Depressed/active, Not depressed/inactive, and Depressed/inactive groups, respectively (P=0.015). Preoperative physical inactivity (HR: 1.70, 95% CI 1.10-2.64), but not depressive symptoms, was independently associated with the composite outcome (p= 0.018). Physical activity status and depressive symptoms were not independently associated with costs of cardiac surgery and re-hospitalization.

**Conclusion:** Preoperative physical activity, but not depressive symptoms has an impact on short-term postoperative re-hospitalization and mortality. Preoperative physical activity behavior and depressive symptoms were not associated with costs due to surgery or one-year re-hospitalization.

## **KNOWLEDGE, ATTITUDES AND BEHAVIOUR OF NURSING STUDENTS TOWARD TRANSGENDER PERSONS**

*Fiona Smith*

### **Background.**

Transgender persons experience significant negative health outcomes, stigma and discrimination. Gender identity is often conflated with sexual orientation and/or mental disorder. Research is beginning to document how erasure, negative attitudes, and discriminatory practices impact the health of transpersons. Less developed is an understanding of how knowledge, attitudes, and behaviour affect the readiness of health professionals to engage in respectful and effective helping relationships.

### **Aim.**

This study uses a structural equation modeling methodology to address the following research questions:

- How does level of familiarity influence attitudes toward transgender persons?
- Are social distance and readiness to provide care separate and distinct measures of predicted behaviour toward transgender persons by nursing students?
- Are social distance and readiness influenced by participation in a nursing education program?
- Are attitudes toward transgender persons better understood as a result of genderism or as a result of psychopathologization?

### **Methods.**

An online survey was completed by 449 nursing and psychiatric nursing students in western Canada. The survey included the following measures:

- Demographic data including type of nursing program, years in program
- Level of Familiarity (LOF: Corrigan, 2008)
- Transphobia Scale (TS: Nagoshi, Adams, Terrell, Hill, Brzuzy, & Nagoshi, 2008)
- Modern Homonegativity Scale (MHS: Morrison & Morrison, 2002)
- Attribution Questionnaire brief (AQ9: Corrigan, 2008)
- Social Distance Scale (SD: Corrigan, 2008)

Structural equation modeling is being used to test a model explaining potential relationships between these phenomena.

### **Results.**

This presentation will report on the statistical relationships between:

- Level of familiarity with transpersons and attitudes toward transpersons
- Attitude toward transpersons and social distance
- Attitude toward transpersons and readiness to provide care
- Mediating effect of years of nursing education and readiness to provide care
- Correlations between transnegativity, homonegativity and attitudes to mental illness

### **Conclusion**

Implications for health professional practice, policy, education, and research will be discussed.

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**THE EXPLORATION OF INTERSUBJECTIVITY BETWEEN THE PERSON LIVING WITH DEMENTIA  
AND THEIR INTIMATELY INVOLVED OTHER**

*Barbara Tallman, University of Manitoba*

In this presentation I argue that a focused ethnography is the best approach for developing an understanding of the intersubjective experience between the person with dementia and their intimately involved other (a spouse, a family member, friend or partner). To make this argument I define intersubjectivity and the focused ethnography. I provide examples of how dialogue, found in qualitative research describing an aspect of the dementia experience, depicts intersubjectivity. I describe how ethnographic studies of social interaction of persons with dementia verify that the explicit description of social interaction can add to the understanding of intersubjectivity. I also provide an overview of the types of ethnographic data that I gather in this study to gain further insight into the intersubjective experience.

**COMMUNICATION INTERACTIONS OF HEALTH CARE AIDES WITH INDIVIDUALS WITH DEMENTIA**

*Lynda Wolf, University of Manitoba*

**Purpose:** It is estimated that by 2038 over a million Canadians will be diagnosed with some form of dementia with nearly 200,000 living in long term care facilities. Non-professional health care workers such as health care aides provide most of the direct care to these residents. The interaction skills of health care aides have a significant impact on the function, communication skills and well-being of residents with dementia. The purpose of this study is to develop a middle range theory to describe and explain how health care aides interpret and understand care recipients with dementia and how this impacts the way they interact with these residents. **Design:** Grounded theory methodology was used to conceptualize data from audio-taped interviews and focus groups. The sample for this study was 24 health care aides who work with residents with dementia in four personal care homes in Winnipeg. **Methods:** Nonprobability, theoretical and purposive sampling, constant comparative analysis, open, axial and selective coding of data from audiotaped interviews with individual participants. Focus groups addressed questions that arose from initial open coding. **Findings:** Participants interpreted residents with dementia as continuing to be adult and respected persons in a relationship with the health care aides. This relationship facilitated the health care aides' caregiving interactions and behavior management strategies with residents. Facilitators of this interpretation were the personal characteristics of the participants while inhibitors were contextual factors such as time constraints, staff shortages, and conflict with other staff. One consequence of this interpretation was the participants' use of communication enhancement strategies with residents. **Significance of the study:** Health care aide educators may teach concepts of personhood in preparing students to understand and interact with resident with severe dementia. . Health care policy makers may develop environments which support the interactions of health care aides and residents with dementia.

## **DO OLDER MEN CHANGE THEIR OPINIONS ABOUT HEALTH-RELATED QUALITY OF LIFE?**

*Maryam A. Alshammari, University of Manitoba; Robert Tate, PhD, University of Manitoba; Donna Collins, MSc, University of Manitoba; Ruth Barclay, PhD, University of Manitoba*

**Problem:** Ensuring better health-related quality of life (HRQOL) is a top priority for most international healthcare institutions and decision-makers, with more attention given recently to older adult populations who may face physical, mental, or social challenges. With age, people may change areas relevant to their HRQOL (reconceptualization), and may change their opinion of the relative importance of these areas (reprioritization). This change is referred to as a response shift (RS). The identification of RS may be helpful for health professionals, family members, caregivers, policymakers, and researchers. The purpose of this study was to explore the RS in HRQOL of community-dwelling older men.

**Methods:** The data for our analysis was obtained from the Manitoba Follow-up Study (MFUS), the oldest longitudinal study of cardiovascular diseases and aging in Canada. Since 1948, a cohort of 3,983 young men, air crew recruits to the Royal Canadian Air Force during WWII, has been followed with routine medical examinations and questionnaires. Data from the Successful Aging Questionnaire was used in which participants determined the importance of 15 items reflecting 2 physical, 5 mental, and 8 social domains of HRQOL over a one-year period (2010-2011). We provided individual and item-level identification of RS and examined predictors of RS using logistic regression.

**Results:** The mean age of 360 older male participants was 89.7 years (SD 2.9) in 2011. Over a one-year period, 92.5% showed RS in at least one of the 15 items. At item level, the average RS was more common in the social domain compared to physical and mental domains (29.2%, 24.1%, 16% respectively). Reprioritization RS was more common in physical (93.9%) and mental domains (92.3%), whereas reconceptualization RS was identified primarily in social domains (39.6%). The direction of reprioritization RS (increased/decreased importance) varies among items, as did reconceptualization RS (adding/dropping a concept of an item). Men who were older, married, and living independently were more likely to show RS in certain items, whereas older men with lower self-rated health were less likely to show RS.

**Conclusions:** Most older men change their opinions about HRQOL; that is a response shift. Having a complete understanding of RS, including when, where, what direction, what type, and the characteristics of people who may experience it, will assist in planning resources or intervention programs and thus help reach the global goal of ensuring better HRQOL for older adults. More studies need to focus on developing individualized methods exploring RS at an individual and item level that can be user-friendly and interpreted in different settings.

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**MENTAL HEALTH CONSEQUENCES AND RISK FACTORS OF PHYSICAL INTIMATE PARTNER VIOLENCE**

*Mahin Delara College of Human Ecology, Faculty of Health Sciences, University of Manitoba, Children's Hospital Research Institute of Manitoba, Winnipeg, Canada*

Violence against women is a public health concern and physical intimate partner violence is the most common form of it. Physical violence is often accompanied by psychological abuse and has detrimental effects on female victims' mental health. While the adverse mental consequences experienced by women due to violence and abuse by their partners have been well established, it is not clear how much of these consequences are the result of physical violence only. Indeed, the mental health impact that physical intimate partner violence has on women is still lacking. This paper reviews and consolidates findings from the existing literature on mental health consequences of male partner violence that are attributed to physical victimization only. Also discussed are variables that increase the risk of mental ill health among female victims of physical intimate partner violence. Recommendations for practitioners, policy makers and future research have been explored.

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**IMPLEMENTING ANTI-RACIST PEDAGOGY IN HEALTH PROFESSIONAL EDUCATION: A REALIST REVIEW**

*Linda Diffey, Javier Mignone, University of Manitoba*

In response to the greater public awareness of anti-Indigenous racism within Canada's health care system, the nation's health education programs are under increasing pressure to incorporate anti-racist approaches in their training of health professionals. But implementation of curricular content about racism has been slow to emerge in these programs and a focus on culture rather than racial oppression persists. Few guidelines currently exist to assist in the application of anti-racist pedagogy in health education, and the published research in this area is relatively limited. The purpose of this systematic review was to explore the peer-reviewed literature using a critical realist framework to identify the factors and processes that influence the implementation of anti-racist teaching in a health context. The findings highlight the role of human actors, contextual factors, and pedagogical processes in either facilitating or impeding the advancement of anti-racist pedagogy in health education.

**TACTILE PERCEPTION INFLUENCES SPINAL MANIPULATION DOSAGE.**

*Steven Passmore<sup>1, 2</sup>, Geoff Gelley<sup>1</sup> & Brian MacNeil<sup>1</sup>*

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**Purpose:** Manually delivered spinal manipulation (SM) is a therapeutic intervention requiring tactile contact between the clinician and patient. Typically, manual palpation for assessment or anatomical land marking precedes SM. While chiropractors commonly utilize SM, little is known on how or if feedback from tactile assessment modulates clinician delivered output. The purpose of the present study was to determine whether chiropractors use tactile feedback in SM dose delivery modulation.

**Method:** In a cross-sectional within-participants design experienced clinicians (>5 years) delivered SM thrusts on low fidelity models. Clinicians (N=5) were not provided with any hypothetical history or patient characteristics. They were asked to treat the models as they would a patient in clinical practice. Thrust delivery was based solely on tactile characteristics chiropractors perceived from the models. In a randomized order clinicians performed 12 trials of high-velocity low-amplitude thrusts, using a covered-thumb push technique, on each of 4 low fidelity models pressurized to 10, 15, 20 and 25 psi respectively for a total of 48 trials. Custom software (E-prime) synchronized triggering of a force transducer, triaxial accelerometer, and 3D motion analysis system. Each system recorded for five seconds at 300Hz. Dependent variables included preload force, and thrust force. Duration, and peak of both resultant acceleration, and resultant displacement were also recorded. Analysis of each dependent measure utilized one-way repeated measures ANOVA models. Significant findings were post-hoc tested using Tukey's HSD.

**Results:** Preload force increased as model pressure increased  $F(3, 16) = 6.941, p = 0.006$ . Peak acceleration of the thrust hand decreased as model pressure increased  $F(3, 16) = 4.138, p = 0.031$ . Displacement decreased as model pressure increased  $F(3, 16) = 6.316, p = 0.008$ .

**Summary:** Chiropractors modulate the dose of their output based on tactile information they perceive from their SM thrust target. The present experiment provides a foundation for the study of how other perceptual factors may also contribute to SM thrust dose modulation.

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**THE EFFECTS OF LEVEL 2 POSITIVE PARENTING PROGRAM (TRIPLE P) ON PARENTAL USE OF PHYSICAL PUNISHMENT, NON-PHYSICAL FORMS OF PUNISHMENT, AND NON-PUNITIVE PARENTING RESPONSES**

*Miriam Gonzalez, Christine Ateah, Joan E. Durrant & Steven Feldgaier, University of Manitoba*

Child maltreatment is a significant public health issue. Reducing prevalence of coercive parenting is one means to reducing risk of maltreatment and negative developmental outcomes for children. Parental use of physical punishment has been associated with adverse consequences in childhood and adulthood. Parent education programs, such as the Positive Parenting Program (Triple P), that promote alternatives to using physical punishment with children may reduce coercive parenting. In this study, parental use of physical punishment, non-physical forms of punishment, and non-punitive parenting responses were compared before and after parents attended Level 2 Triple P parent education seminars. International Parenting Survey-Canada (IPS-C) data were used to examine Belsky's (1984) theoretical proposition that parental factors are the strongest predictor of parenting behaviour followed by contextual and child factors. Independent samples t-tests, Wilcoxon Signed Rank Tests, and a series of regression models were used to examine the study's hypotheses. A total of 27 parents attended the Triple P sessions. Parental use of physical punishment decreased on only one of the four physical punishment items (shaking) post- intervention. Although there were no significant differences in overall use of non-physical forms of punishment and non-punitive parenting strategies pre and post-intervention, there were significant increases in frequency of use of individual scale items pre- to post-intervention. IPS-C sample of 2,340 Canadian parents was used to examine Belsky's postulate. Results were mixed and provided partial support for the postulate. Child behaviour problems, participation in parent education programs, parent employment status, and parent age predicted coercive parenting. Findings highlight the need to further examine these hypotheses.

## EXPOSURE TO DIABETES IN UTERO IMPAIRS CARDIAC RELAXATION IN YOUTH WITH TYPE 2 DIABETES

Laetitia Guillemette<sup>1</sup>, Allison Dart<sup>2</sup>, Vernon W. Dolinsky<sup>1</sup>, Davinder Jassal<sup>3</sup>, Elizabeth Sellers<sup>2</sup>, Todd Duhamel<sup>1,3</sup>, Jonathan McGavock<sup>2</sup> and the iCARE investigators team<sup>2</sup>  
<sup>1</sup>University of Manitoba. <sup>2</sup>Children's Hospital Research Institute of Manitoba, <sup>3</sup>St. Boniface Hospital Research Centre, Winnipeg, MB, Canada

**Introduction:** At least 1 Canadian child per class of 20 was exposed to type 2 diabetes (T2D) or gestational diabetes (GDM) *in utero* and is therefore at a greater risk than his classmates for T2D and its cardiovascular complications himself.

**Objective:** To determine if exposure to T2D or GDM *in utero* is associated with adverse changes in cardiac morphology and function in adolescents with T2D compared to adolescents with T2D not exposed to diabetes *in utero*.

**Methods:** We performed cross-sectional comparisons of echocardiography-derived cardiac morphology and function in 82 Indigenous adolescents stratified per maternal-reported diabetes status during pregnancy: T2D (n=37), GDM (n=13) or normoglycemia (n= 32). The main outcome measures were left ventricular (LV) morphology, mass, as well as diastolic and systolic function. The groups were similar for the following confounders: sex (62 vs 43 vs 71% female), age (~15 years), duration of diabetes (~3.0 years), adiposity (30-33% body fat) and blood pressure load (45 [22-74] vs 42 [24-53] vs 33 [19-61]% of wear time).

**Results:** We observed smaller LV mass (137 [112-174] vs 150 [130-183] vs 168 [140-190] g; p=0.02 for trend) and impaired LV relaxation (early-to-late tissue relaxation: 1.9 [1.6-2.3] vs 1.8 [1.6-2.3] vs 2.3 [1.8-3.0]; p=0.03 for trend) in those exposed to T2D and GDM compared to controls. No differences were observed in LV hypertrophy (interventricular septal wall thickness: 10.4 [9.4-11.6] vs 10.6 [9.7-12.0] vs 11.0 [10.2-12.5] mm; p=0.2) and systolic function was reduced only in adolescents exposed to GDM (ejection fraction: 61.3 [57.0-64.2]%) compared to those exposed to T2D (64.3 [62.0-67.3]%) or normoglycemia (64.3 [62.0-65.7]%; p=0.02).

**Conclusion:** Adolescents with T2D exposed to T2D or GDM *in utero* exhibit smaller LV size and impaired LV relaxation in the absence of alterations in LV morphology or systolic function. Exposure to diabetes *in utero* may be associated with cardiomyopathy in adolescents with T2D.

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**MANAGING ACCULTURATIVE STRESS THROUGH CULTURALLY RESPONSIVE LEISURE FOR IMMIGRANTS IN CANADA**

*Jason Kim<sup>1</sup> & jay johnson<sup>2</sup>*

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The experience of acculturation stress during immigrants' adaptation to a host country poses a special challenge for their health, well-being, and quality life because of their marginalized positions in their dominant country. The aim of this study was to test the hypothesis that leisure meanings buffer against the adverse effects of acculturation stress on the psychological and sociocultural adaptation of Korean immigrants to Canada.

Data were collected through surveys with a sample of 120 Korean immigrants. Prior to the main study, a pre-test was conducted to ensure that the measures and procedures used were relevant to the target population. The data were then analyzed using a series of hierarchical multiple regression analyses to test the hypothesis after conducting exploratory factor analyses of a newly developed measure, the Leisure Adaptation Meanings Scale (LAMS).

Overall, acculturation stress was significantly associated with lower life satisfaction and self-esteem, poorer mental health, and more difficult sociocultural adaptation. Contrary to the hypothesis tested, the study only supported the main effects of leisure meanings on life satisfaction and self-esteem, but did not provide evidence for the moderating effects of leisure meanings to buffer against acculturation stress on adaptation.

The conclusion of this study is that meaning-making through leisure is culturally grounded, and leisure-generated meanings in life appear to be a good predictor of positive life satisfaction and self-esteem among a sample of Korean adults. This research makes contributions to both the knowledge production and practical implications for not only leisure practices but also for Canadian society.

**DESIGNING A METASYNTHESIS STUDY IN PEDIATRIC ONCOLOGY NURSING RESEARCH**

*Corey Sigurdson, RN, MN, PhD(C)<sup>1,2</sup> & Roberta Woodgate, RN, MN, PhD<sup>1,3</sup>*

*<sup>1</sup>University of Manitoba; <sup>2</sup>Applied Health Sciences PhD Program; <sup>3</sup>College of Nursing*

The synthesis of qualitative evidence is called *metasynthesis*. The term metasynthesis describes both a group of methods used to integrate the findings of individual qualitative research studies and the end product of a metasynthesis research project. In this poster, pediatric oncology nurses are encouraged to use metasynthesis research to facilitate the integration of the existing body of qualitative pediatric oncology nursing research into practice. For pediatric oncology nurses to be successful in metasynthesis research, they require practical guidance in navigating the terminology and methodology of this evolving research design. Misconceptions about metasynthesis research, types of metasynthesis research designs, steps involved in developing a metasynthesis study, and the benefits and challenges of using metasynthesis in pediatric oncology research are presented. Examples of studies that have used two distinct metasynthesis techniques are provided. While this poster addressed the context of pediatric oncology nursing, the findings presented are equally relevant to other applied health clinicians such as Kinesiologists, Rehabilitation Professionals and Family Health Practitioners.

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**THE RELATIONSHIP BETWEEN PERPETRATOR VULNERABILITIES AND SUBSTANTIATED REPORTS OF CHILD MALTREATMENT IN CANADA: EXAMINING THE CANADIAN INCIDENCE STUDY OF REPORTED CHILD ABUSE AND NEGLECT (CIS) 2008**

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**Introduction:** Most of the research on caregiver vulnerabilities associated with the perpetration of child maltreatment focuses on perpetrators of child physical or sexual abuse. Less is known about the association of specific perpetrator vulnerabilities and the risk of other types of child maltreatment. The primary objectives were to: (1) examine the distribution of perpetrator vulnerabilities and total number of perpetrator vulnerabilities by type of substantiated maltreatment; (2) examine the association of specific types of perpetrator vulnerabilities with child physical and mental or emotional harm; and (3) determine if a dose-response relationship exists between the total number of perpetrator vulnerabilities and child physical and mental or emotional harm as a result of maltreatment.

**Methods:** Data were from the nationally representative Canadian Incidence Study of Reported Child Abuse and Neglect collected in 2008 (CIS-2008). The CIS-2008 consisted of investigations of children age 15 years and younger from 112 child welfare sites across Canada (N = 15,980).

**Results:** Perpetrator vulnerabilities were prevalent among cases of child maltreatment substantiated by child welfare agencies across Canada. Low social support, domestic violence, mental health issues, and substance abuse problems were noted among a substantial proportion of abusive caregivers, particularly in cases of substantiated neglect, exposure to intimate partner violence, and with more than one type of substantiated maltreatment. Caregiver cognitive impairments were associated with increased odds of child physical harm. Most individual types of perpetrator vulnerabilities, and the total number of perpetrator vulnerabilities, were associated with increased odds of child mental or emotional harm.

**Conclusion:** Insight into caregiver vulnerabilities associated with the perpetration of specific types of child maltreatment may help to inform intervention targets prior to a family's involvement in the child welfare system.

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**COMBAT TRAUMA AND INTIMATE PARTNER RELATIONSHIPS: REVIEW OF THEORETICAL PERSPECTIVES**

*Melissa D. M. Weavers & Caroline C. Piotrowski, University of Manitoba*

Although research has consistently identified associations between posttraumatic stress disorder (PTSD) symptoms and a range of negative family functioning outcomes, to date little attention has been paid to the course of combat trauma and couple distress. This review addressed current theoretical perspectives that may account for the unique interaction between combat trauma and intimate partner relationships, with the goal of identifying explanatory mechanisms by which symptoms and distress are maintained or exacerbated. Hobfoll's (1988, 1989) Conservation of Resources theory is presented as a new lens through which to examine the cyclical intersection of combat trauma symptomology and couple distress, using the avoidance PTSD cluster as a specific example.