



# **INTRODUCTION/BACKGROUND**

Recent research suggests that paramedics may be at increased risk for developing work-related health issues. Paramedics appear to have an increased prevalence of early retirement based on medical grounds, a greater frequency of musculo-skeletal injuries, and an increased prevalence of post-traumatic stress disorder (PTSD) and anxiety (Sterud et al.,2006). However, to date educational programs for paramedics appear "somewhat preoccupied with the technical and physical aspects of varying trauma management" (Williams, 2013: p207) while the stress and/or PTSD that can impair one's ability to function in such complex environments, significantly impacting work performance and quality of life (Lopez, 2011), has been overlooked. Gayton and Lovell (2012) advocate for increased attention paid to the development of resilience skills in paramedics and paramedic students. Without skills to mitigate and manage workplace trauma, paramedics are at risk for developing trauma related mental health problems.

The present study examined the impact of a short, self-paced online resiliency training program to help students training to be Primary Care Paramedics mitigate the risks associated with working in a trauma informed work setting. The online curriculum aimed at teaching resiliency skills, building personal resiliency resources to be used through their practicum placements and further employment. It was hypothesized that a short-duration, self-paced course would increase students' resiliency throughout the program, including their practice education experience on ambulances and in hospital emergency departments.

### METHODS

Using a randomized control trial, cohorts of students were randomly assigned to either the experimental (with the online course as an intervention) or control group. Two cohorts were randomly assigned to receive the online course intervention designed to build capacity for resilient behaviour, while two cohorts acted as the control group. Cohorts were campus based, and students were not at the same location for training, reducing any contamination of data. Resilience was measured in all participants using version 3.20 of the Resilience Scale developed by Gail Wagnild (2011).

## RESULTS

In total, 81 students participated in the experimental group, and 57 in the control group. Prior to the intervention there were no significant differences in total resilience or any of the sub-scales (P>0.05). Following the resiliency training and the practicum experience the experimental group scored better in total resilience and each of the sub-scores (P<0.05).



# **Building Personal Resilience in Paramedic Students**

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		Control	Experimental
		(no.)	(no.)
Gender	Male	2	8 60
	Female	29	9 21
	Total	5	7 81
		(yrs.)	(yrs.)
Age	Total	25.	3 25.6

Mean pre and post scores for the control and experimental group



■ Experimental Group Pre ■ Experimental Group Post

The mean pre and post scores were not significantly different pre and post practical experience on the ambulance in the control group, while scores were significantly higher in the experimental group following the 4-8 hour resilience training and practical experience. There were no significant differences in the age, gender distribution, years experience or level of education prior to Primary Care Paramedic training.



Experime	ental Group	
Pre	Post	
29.00	37.00	
28.06	31.53	
27.02	34.00	
28.22	33.27	
28.25	36.68	
140.56	173.36	

#### DISCUSSION

Rescue workers were found to have a pooled prevalence of post traumatic stress disorder (PTSD) of 10%, being highest in paramedics (14.6%) (Berger et al., 2012). In Australia, Streud et al. (2006) reported the incidence of PTSD in paramedics to be greater than 20%. It seems clear from the limited research to date that the stressors associated with ambulance work may lead to increased mental health concerns, short and long term disability (LeBlanc et al., 2012).

This research examined the efficacy of resiliency training on strengthening personal resilience in students training to be Primary Care Paramedics. By developing and delivering online curriculum aimed at teaching resiliency skills and introducing appropriate resources to paramedic students, it was hypothesized that this training would increase students' resiliency throughout the program, including their practice education experience on ambulances and in hospital emergency departments. The positive results indicate that paramedic students' resilience during their practice education experience can be increased by a short resiliency-training curriculum.

#### APPLICATION

The possibility that such training could have positive effects on preventing, reducing and/or mitigating the risks of working in a trauma-informed work environment may have broad application in recruit and incumbent training in various first responder and receiver occupations.

#### CONCLUSION

Results demonstrated a significant improvement in the paramedic students' resiliency following the online training. These positive results suggest that resiliency education during paramedic training programs have significant impact on students who are placed into on-the-job pre-employment training. The possibility that such training could have positive effects on preventing, reducing and/or mitigating the risks of working in a trauma-informed work environment could result in important improvements in the quality of life of first responders, and reduce short and long term disabilities associated with post-traumatic stress.

### **KEY REFERENCES**

Berger et al., (2012). Social psychiatry and psychiatric epidemiology, 47(6), 1001-1011. Gayton, & Lovell (2012). *Traumatology*, 18(1), 58. LeBlanc, et al., (2012). Prehospital and disaster medicine, 27(04), 369-374. Sterud et al., (2006). BMC Health Services Research, 6(1), 82. Wagnild, G. M. (2011). The Resilience Scale User's Guide: For the US English Version of the Resilience Scale and the 14-item Resilience Scale Williams (2013). Nurse education in practice, 13(3), 207-212.



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