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Brief Research Letter

Preliminary Results and Publication Impact of a Dedicated Addiction Clinician Scientist Research Fellowship

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Preliminary Results and Publication Impact of a Dedicated Addiction Clinician Scientist Research Fellowship

Clinician-scientists serve to bridge the gap between addiction research and clinical practice but cultivating clinician-scientists, who are able to develop and publish clinical research, remains a challenge (Einhorn, 2006; Hauser, et al., 2006; Roberts, et al., 2012; Wilson-Kovacs, et al., 2012). Therefore, we describe the design and first-year data from a controlled, non-randomized comparison trial that prospectively evaluates how a dedicated research-training program for addiction medicine physicians contributed to subsequent research involvement and research productivity.

In order to evaluate our Canadian research-training fellowship, funded by the U.S. National Institute on Drug Abuse (NIDA), we compared accepted fellows with non-admitted controls, based on baseline questionnaire and rate of peer-reviewed publication (Wood, et al., 2013). The study sample was drawn from those physicians who applied to the part-time, one-year addiction research immersion-training program. Of the eight top-ranked individuals from the 11 applicants, four were selected to participate in the training program and another four were designated to serve as a comparison group. Participants' publication rates were followed via biomedical databases (e.g., PubMed, EMBASE) after applying to the program. The main outcome measure was the number of first-author publications at the end of the one-year fellowship.

The addiction research immersion training program consisted of three half-days per week of addiction research training, two half-days per week of longitudinal research methods training, and three half-days per week of mentored publication and grant development. The control group continued in their usual clinical practice. Participants were not compensated for their time. The

Providence Health Care/University of British Columbia Behavioural Research Ethics Board (PHC/UBC REB) has approved this study (Certificate no. H14-00244).

At baseline (N=8, five women), six participants reported any past research involvement, three had one or more advanced graduate degrees (e.g., MPH, PhD) and four had published peer-reviewed publications as a first author (total of six). They were internal medicine physicians (one), family physicians (five), psychiatrists (one) and one public health physician. At the end of the one-year fellowship, the four fellows published seven papers and the controls published one paper; however, this difference was not statistically significant due to the small sample size (Table 1).

These preliminary results suggest that a structured clinical research-training program could lead to an increased rate of publications, as indicated by previous, non-experimental research (Alford, et al., 2009; Truncali, et al., 2012; Guydish, et al., 2015). The study has a number of limitations including: a non-randomized design, small sample size and a limited follow-up interval. The fellowship cohort had more papers published as first author papers than the control group. We did not evaluate the impact of being married and possibly having family responsibilities on research productivity. Based on the first-year data, we expect that, with further prospective follow up and cohorts of fellows and controls, undertaking the research fellowship program will be independently associated with significant research outputs, signalling successful training of the next generation of addiction clinician-scientists, who can help close the gap between clinical evidence and standards of care in this area.

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Table 1 Baseline and follow-up characteristics stratified by the 2014/15 program group (n = 8)

Characteristic	Value	Total N (%) 8 (100)	Fellows n (%) 4 (50)	Controls n (%) 4 (50)	p -value
Age (median, IQR)	Per year older	34 (34-41)	37.5 (29-44)	34 (30-37)	0.443
Gender	Male	3 (37.5)	2 (50)	1 (25)	1.000
	Female	5 (62.5)	2 (50)	3 (75)	
Year of medical school graduation	(median, IQR)	2009 (2002-2011)	2009 (2001-2011)	2008 (2002-2011)	0.443
Residency program	Internal Medicine	1 (12.5)	1 (25)	0 (0)	1.000
	Family Medicine	5 (62.5)	3 (75)	2 (50) ^b	1.000
	Psychiatry	1 (12.5)	0 (0)	1 (25)	1.000
	Other	1 (12.5)	0 (0)	1 (25)	1.000
Canadian Med. School	Yes	6 (75)	3 (75)	3 (75)	1.000
	No	2 (25)	1 (25)	1 (25)	
No. First-author papers[*]	n (%)	6 (100)	5 (83.3)	1 (16.7)	0.100
No. Co-author papers[*]	n (%)	14 (100)	4 (40)	10 (60)	0.443
No. Papers published under different name (e.g. maiden name)[*]	n (%)	7 (100)	0 (0)	7 (100)	0.343
Advanced grad. degree[*]	Yes	3 (37.5)	1 (25)	2 (50)	1.000
	No	5 (62.5)	3 (75)	2 (50)	
Past res. experience[*]	Yes	6 (75)	3 (75)	3 (75)	1.000
	No	2 (25)	1 (25)	1 (25)	
Total res. funding^a	<i>Currency:</i>				
	USD\$	8,000	8,000	0	0.343
	CAD\$	1,260,211	50,000	1,210,211	0.443
No. Scholarly presentations^a	n (%)	16 (100)	7 (43.8)	9 (56.2)	0.343
No. New first-author papers at Fellowship end^c	n (%)	8 (100)	7 (87.5)	1 (12.5)	0.100

^a Denotes activities in the past 5 years before the date of application.
^{*} As self-reported on the date of application/informed consent, i.e. 3 May - 8 Jun 2014
^b It's actually '3' as one participant did both Family as well as Public & Preventive Medicine
^c Fellowship ends on June 30th each year.