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The Impact of a Scholarly Concentration Program on Pediatric Medical Student Research

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BACKGROUND & OBJECTIVE

- Promoting pediatric research is key to improving children's health
- A benefit to medical student (MS) research includes promoting interest in future scientific inquiry
- Productivity resulting in a publication is one desired outcome
- Objective:** Study factors impacting manuscript publication rates from MS researchers in Pediatrics versus non-Pediatric departments in the University of Wisconsin School of Medicine & Public Health (UWSMPH) MS scholarly concentration program (SCP)

METHODS

- The Shapiro Endowment was primary funder of summer SCP at UWSMPH
- IRB deemed program exempt as quality improvement
- Prospectively collected dataset from 2002-2017 in SCP where students self-select projects & mentors
- Data from:
 - Medical students (n=1108 total, n=102 Pediatrics)
 - Primary mentors (n=422 total, n= 37 Pediatrics)
- PubMed search identified joint student-mentor research publications within 2 years of student graduation
- Publication Rate Variables
 - Mentor Experience
 - Mentor Degree
 - Training Grant Funding
 - Research Field
- Statistical Analysis
 - Summary statistics and rates determined, Chi², ANOVA performed, $p < 0.05$ significant

Publication rates did not differ between Medical Students in Pediatrics versus other departments, though having an experienced mentor did improve publication rates.

Publications	Overall n= (%)	Pediatric MS n= (%)	non-Pediatric MS n= (%)	Significance
Any Publication	380 (34%)	38 (37%)	342 (34%)	p=0.59
First Author Publication	186 (17%)	16 (16%)	170 (17%)	p=0.89

RESULTS

Table 1- Demographics. Pediatric MS favored Public/Global Health research more than non-Pediatric MS.

Demographics	Sub-Demographics	Overall n= (%)	Pediatric MS n= (%)	non-Pediatric MS n= (%)	Significance
Frequent Mentor		360 (32.5%)	37 (36%)	321 (32%)	p=0.45
Mentor Degree					p=0.20
	MD-Only		58 (57%)	551 (55%)	
	MD with Masters Degree		16 (15%)	151 (15%)	
	PhD with or without MD		28 (27%)	304 (30%)	
Training Grant			5 (5%)	113 (11%)	p=0.07
Type of Research					p=0.002
	Clinical Research	582 (53%)	40 (40%)	542 (54%)	
	Basic Science	288 (26%)	24 (24%)	264 (26%)	
	Public/Global Health	233 (21%)	36 (36%)	197 (20%)	

Table 2- Publication Differences. While greater publication rates were seen with experienced mentors & mentors with sole MD degrees, findings did not hold true when comparing Pediatric to non-Pediatrics MS.

Publications	Pub Sub-Group	Any Pub (p=)	Peds vs Non-Peds MS (p=)	1st Author Pub (p=)	Peds vs Non-Peds MS (p=)
Experienced Mentor		0.0008	0.38	0.0001	0.11
Mentor Degree			0.58		0.74
	MD-only vs MD/Masters	0.01		0.49	
	MD-only vs PhD w/ or w/o MD	0.005		0.004	
	MD/Masters vs PhD w/ or w/o MD	0.87		0.14	
Training Grant		0.003	0.36	0.001	0.45
Type of Research		0.25	0.7	0.76	0.998
	BS v C	0.5		0.25	
	BS v PGH	0.55		0.92	
	C v PGH	0.19		0.34	

CONCLUSIONS

- Little is understood about what makes a SCP effective in enhancing medical school education & future career choices
- Using publication rates as a proxy for research productivity allowed us to evaluate SCP variables
- Experienced mentorship is the leading factor improving medical student publication rates
- Medical Students in Pediatrics selecting more Public/Global Health projects reflects the American Academy of Pediatrics goals of improving Pediatrician Advocacy efforts

FUTURE PLANS/ACKNOWLEDGMENTS

Future Plans

- Evaluate if medical student publication rates correlate with choosing a future career in academic medicine
- Increase mentor training to improve research learning & productivity in medical students

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