

**Maine Medical Center
Department of Emergency Medicine
Journal Club Summary Template**

Date: 09/2021	Presenter Name: Tamar Stokelman, MD
----------------------	--

Article Citation:	Guille et al. <i>Work-Family Conflict and the Sex Difference in Depression Among Training Physicians</i> . JAMA Internal Medicine. December 2017, Volume 177, Number 12
Country(ies): US	
Funding Source(s):	Funded by the National Institute on Drug Abuse, National Institute of Mental Health, National Center for Advancing Translational Sciences
	<input type="checkbox"/> None Stated

Purpose
<p>Research Question(s):</p> <p>Does depression disproportionately affect female physicians compared with male physicians during the internship year, and does work-family conflict impact the sex difference in depressive symptoms among training physicians?</p> <p style="text-align: right;"><input type="checkbox"/> None Stated</p>
<p>Hypotheses:</p> <p>Didnt really state a clear hypothesis, but seemed as though the hypothesis was that females would be disproportionately affected with depression during intern year and that work-family conflict would contribute to more depressive symptoms in females vs males.</p> <p style="text-align: right;"><input type="checkbox"/> None Stated</p>
<p>Study Purpose:</p> <p>Understand how depressive symptoms affect interns and work-family conflict vary between men and women</p>

Methods
<p>Study Design:</p> <p>After 2015 to 2016 residency match, emails sent to all those that matched across all specialties inviting them to participate in an online assessment 2 months prior to intern year and 6 months after intern year.</p>
<p>Outcome(s) [or Dependent Variable]:</p> <p>Change in scores of PHQ-9 (Primary care tool to screen for depression)</p>

Participants indicate over the past 2 weeks symptoms bothered them “not at all”, “several days”, “more than half the days”, “nearly every day”. Score of 10+ has sensitivity of 88% and specificity of 88% for diagnosis of major depression

Work and Family Conflict Scale (measures conflict that arises when work responsibilities undesirably affect family roles. 5 questions and rate agreement based on very strongly disagree to very strongly agree.

Intervention [or Independent Variable]:

Time - 6 months of intern year, sex

Ethics Review: IRB Review IACUC Review Other: None Stated

Research Setting:

341 different residency institutions

Email addresses were gathered from program directors, medical school administrators, and publically available databases. \$25 for each survey they completed

Study Subjects:

5150 medical students matching into residency were sent emails and 3121 (61%) agreed to participate.

Students matching into 23 medical and surgical specialties at 341 US institutions

Mean age 27.5 years

1571 (49.7%) women

42% of men were married/engaged vs 36.7% women married/engaged

9.8% of men had children vs 6.5% of women

49.3% of women reported a hx of depression vs 41.8% of men.

Inclusion Criteria:

None

Exclusion Criteria:

None

Study Interventions:

Study Groups:

Instruments/Measures Used:

Data Collection:

Data collected through secure online surveys using Qualtrics survey software. Participants were sent an email that they could “agree” or “not agree” to take. Survey data had a unique nondecodable identification and personal identifying information was kept private.

In first survey, patients included general demographics with age, sex, ethnicity, number of children, relationship status as well as PHQ-9 and Work and Family conflict scale.

Data Analysis:

A priori sample size calculation? Yes No Not Described N/A

Statistical analyses used:

Chi squared test and independent t test were used to assess baseline differences between men and women in regards to demographics and history of depression.

Paired t test to assess changes in work family conflict scores over time

Sample t test to assess sex differences in the change work family conflict scores.

Pearson correlation used to quantify how work family conflict and depression were associated.

2 models

1. minimally adjusted model - PHQ-9 scores and looked at how that changed based on time, sex, relationship status, if they had children, or a history of depression
2. Fully adjusted model - determine how work/family conflict confounded the data for women vs men.

Adjustment for potential confounders? Yes No Not Described N/A

If yes, list:

Results**Study participants:****Brief answers to research questions [key findings]:**

Work family conflict changes

Prior to intern year, no significant differences between work family conflict scores between men and women. However 6 months into intern year, women had higher work-family conflict scores compared to men.

Depression score changes:

Women and Men pre-internship depression scores were similar with women 4% higher than men. For both men and women, depression sx increased substantially after 6 months of internship. 93% increase for men

and a 115% increase for women. Increase among women was higher than men - statistically significant, even when adjusting for changes in work/family conflict.

Increase in work-family conflict directly correlated with increase in PHQ9 depression scores. When both women and men had an increase from 25% to 75% in work family conflict scores, women had a higher increase in their PHQ9 score when compared to men.

Having a partner and/or children did not impact that magnitude of the relationship.

Additional findings:

Limitations:

Depressive sx were assessed through self report inventory rather than diagnostic interview.
61% of interns agreed to take part in study - with 68% completion of 2nd part. Possible that there was a response bias (those with more depressive sx, more family conflict are interested in study and thus participate)

Clinical Implications

Applicable?

Feasible?

Clinically relevant?

Huge study with 3121 interns at 23 medical and surgical specialties at 341 US institutions

Comments:

Level of evidence generated from this study

- Ia: evidence obtained from meta-analysis of randomized controlled trials
- Ib: evidence obtained from at least one randomized controlled trial
- IIa: evidence obtained from at least one well-designed, controlled study without randomization
- IIb: evidence obtained from at least one other type of well-designed quasi-experimental study
- III: evidence obtained from a well-designed, non-experimental study
- IV: expert committee reports; expert opinion; case study; case report

Additional Comments/Discussion/Notes

1. Less people going straight into residency, now more common to take years off, age of interns is increasing, making sure we are recognizing the impact that home life has on depression and work.
2. Everyone's "family life" is different. Having a partner and/or children did not impact that magnitude of the change in PHQ9 scores. How we define a family. Whether that's a dog, kids, caring for your house, keeping in touch with your family that lives far away.
3. Male physicians are 1.4 times more likely and female physicians are 2.27 times more likely to die by suicide compared to their counterparts in the general population
4. Pilot programs designed to ease work-family conflicts including home delivered meals, childcare, housecleaning.
5. Patients of female physicians have lower readmission and mortality rates compared to male physicians, efforts to reduce work family conflict and depression to retain women in medicine improves patient outcomes.