

Why Don't Dental Patients Show Up for Appointments?

*A Model for Understanding the Implications
of Fear on Treatment-Seeking*

Cameron L. Randall, Daniel W. McNeil, and Robert N. Stuchell
West Virginia University



Significance

- Understanding how the components of dental care-related fear and anxiety affect emergency treatment seeking is of clinical significance and utility
- **Ultimate goal: Improve dental treatment utilization**



Treatment-Seeking Behavior

- Asymptomatic
 - Patients visit regularly for prophylaxes or other preventive treatment
- Symptomatic
 - Patients visit only in cases of severe pain or dysfunction (i.e., an emergency)



Why Emergency Patients?

- Perhaps could be “converted” to seek treatment asymptotically
- A population that likely could benefit from dental clinic-based interventions for fear/anxiety



Dental Care-Related Fear and Anxiety

- Dental care-related **fear** is an in-the-moment response to the (threatening) dental situation
- Dental care-related **anxiety** is the apprehension that occurs in anticipation of the dental situation



Prevalence and Impact on Treatment-Seeking Behavior

- Between 10 and 20 percent of Americans report a high level of dental care-related anxiety (Smith & Heaton, 2003)
- Dental care-related anxiety associated with treatment avoidance (Doerr et al., 1998; Moore et al., 1996)



Barriers to Regular Oral Health Care

- Structural Barriers
 - Impact *access*
 - E.g., geographical limitations, low socioeconomic status, limited provider availability
- Psychosocial Barriers
 - Impact *utilization*
 - E.g., negative beliefs about the dentist, poor oral health values, dental care-related fear/anxiety



Specific Aims and Hypotheses

- Aim 1: To examine the relations among dental beliefs, dental care-related fears, and fear of pain in a symptomatic treatment-seeking population
 - Hypothesis 1: Fear of pain and negative dental beliefs are positively correlated with dental care-related fears



Specific Aims and Hypotheses

- Aim 2: To determine the impact and mechanism of the role of dental care-related fear and anxiety in long-term utilization of an emergency dental clinic
 - Hypothesis 2: Dental care-related fear (or a correlate) is predictive of a greater number of extractions over the long term
 - Hypothesis 3: Dental care-related fear (or a correlate) is associated with less asymptomatic treatment-seeking behavior



Design

- Retrospective cohort design
 - April, 2001 - July, 2001: Initial contact with patients
 - Followed patient behavior for 10 years by way of chart review
- Both components of study approved by the West Virginia University IRB



Participants

- 82 adults who presented to the Emergency Clinic at the West Virginia University School of Dentistry
 - Average age: 35.5 years ($SD = 14.6$)
 - Average number years of education: 12.4 ($SD = 1.9$)
 - Equal number males and females



Self-Report Measures

- Dental Fear Survey (DFS)
 - 20-item, self-report measure of anxious reactions to dental situations
- Fear of Pain Questionnaire (FPQ-III)
 - 30-item, self-report measure of pain-related fear
- Getz Dental Beliefs Scale (DBS)
 - 28-item, self-report measure of feelings and reactions to dental work and dentistry

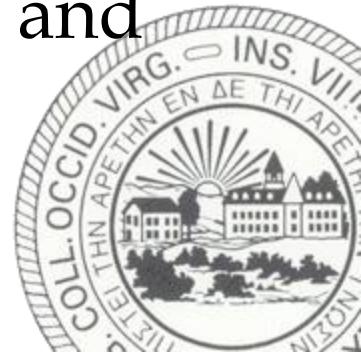


Chart Review

- Completed for each randomly chosen participant for whom a dental chart exists
 - Top 5% and bottom 50% Dental Fear Survey scores
 - Sex-balanced
- Recorded: Number of visits over the 10-year period, procedures performed at each visit

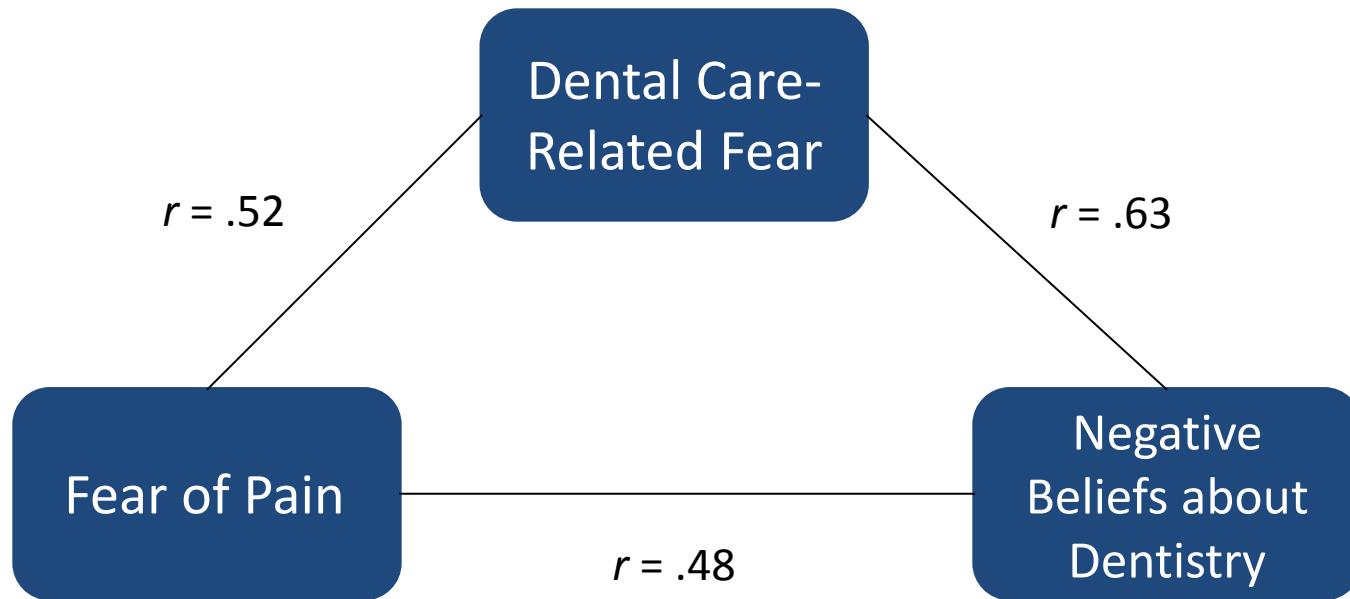


Results – Patients

- Patient Characteristics
 - Average number of visits: 5.5 ($SD = 8.8$)
 - Average number of missed appointments: .45 ($SD = 1.3$)
 - How many patients return to the SOD clinic? 61%
 - Average number of restorations: 1.4 ($SD = 4.5$)
 - Average number of extractions: 3.2 ($SD = 5.4$)
 - Average number of cleanings: 0.3 ($SD = .9$)



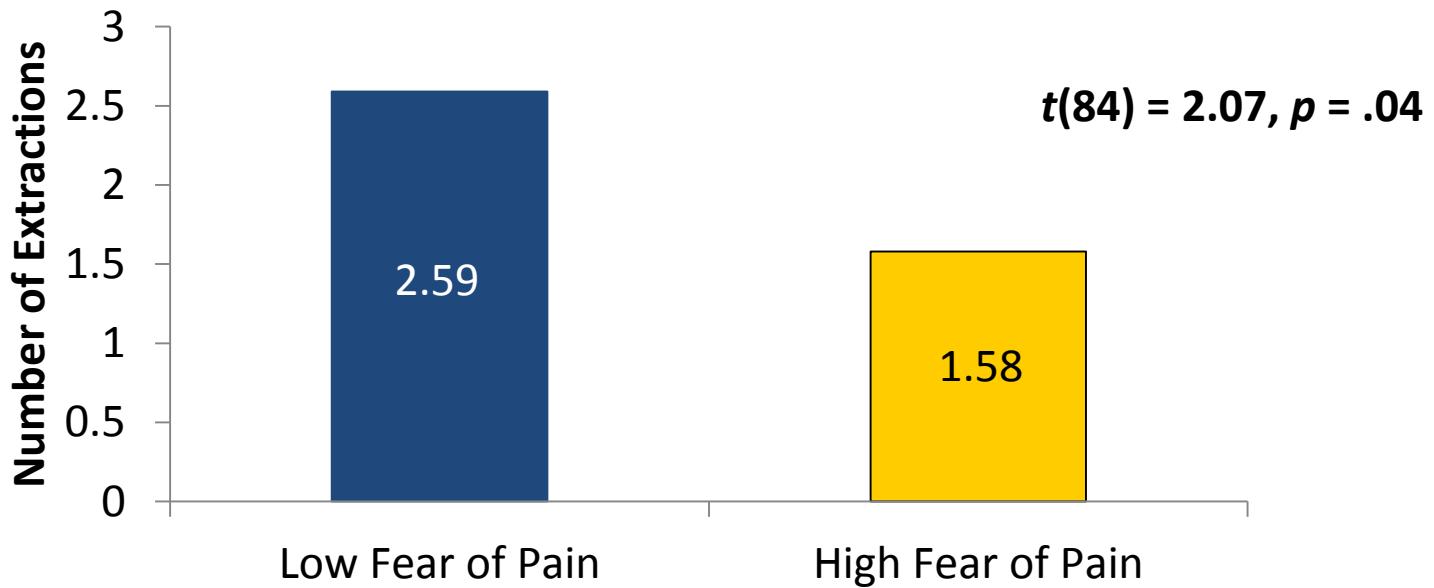
Results – Psychosocial Barriers to Care



All correlations significant at $p < .001$



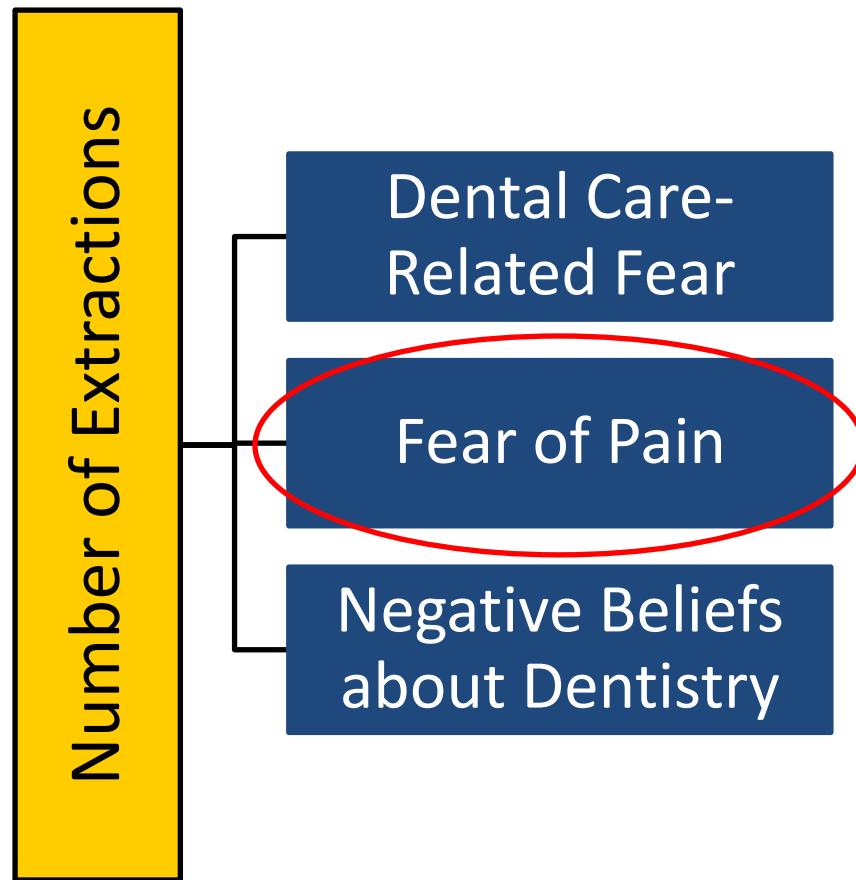
Results - Extractions



- No significant differences in number of cleanings, restorations, or missed appointments across dental fear and fear of pain groups



Results - Extractions



Results - Extractions

Regression model: What predicts number of extractions?

Predictor Variable	Unstandardized regression coefficient (B)	Standard Error	Standardized Regression Coefficient (β)	Significance Value (p)
Sex	-.371	.534	-.081	.489
Age	.039	.020	.223	.062
Years of Education	-.016	.127	-.014	.901
Dental Fear Survey Score	-.003	.013	-.036	.811
Dental Beliefs Scale Score	-.003	.013	-.032	.837
Fear of Pain Questionnaire Score	-.079	.040	-.261	.050



Results – Preventive Care

	Fear of Pain Questionnaire Score	Dental Fear Survey Score	Dental Beliefs Survey Score
Symptomatic only	$M = 23.85 (SD = 7.72)$	$M = 54.41 (SD = 26.40)$	$M = 58.41 (SD = 27.21)$
Asymptomatic	$M = 21.11 (SD = 6.27)$	$M = 38.44 (SD = 20.57)$	$M = 35.44 (SD = 5.77)$

$t(80) = 1.02, p = .15$

$t(80) = 1.75, p = .04$

$t(80) = 2.51, p = .005$



Conclusions

- Hypothesis 1: Fear of pain and negative dental beliefs are positively correlated with dental care-related fears.

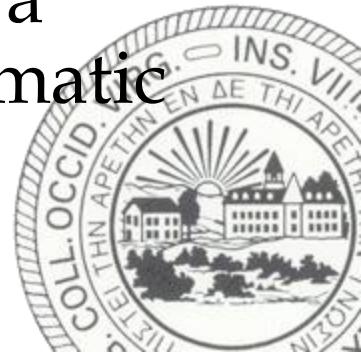
SUPPORTED.

- Hypothesis 2: Dental care-related fear (or a correlate) is predictive of a greater number of extractions over the long term.

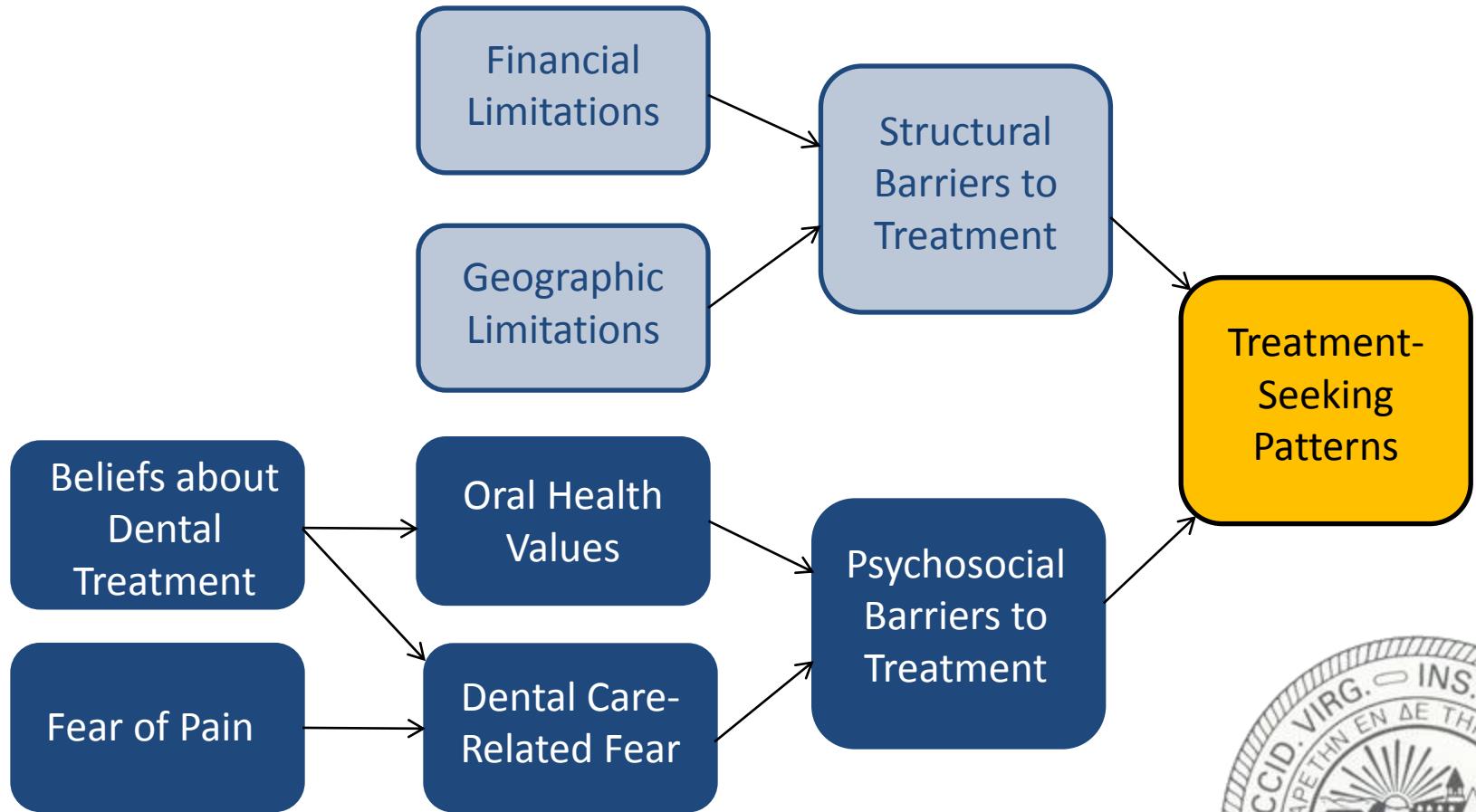
Evidence for the opposite.

- Hypothesis 3: Dental care-related fear (or a correlate) is associated with less asymptomatic treatment-seeking behavior.

SUPPORTED.



A Model for Understanding Emergency Treatment-Seeking



Limitations

- Data are not available for dental visits outside of the School of Dentistry clinic
 - Are patients receiving regular asymptomatic care? Emergency/symptomatic care elsewhere?
- Chart entries are not uniform across visits
- Difficult to account for other important variables (e.g., SES, oral health values, geographical limitations to access)



Final Thoughts

- Understanding why symptomatic treatment-seeking patients access care only in emergency situations is important
 - Oral health professionals may have an ideal opportunity to intervene
 - Interventions could:
 - Reduce “vicious cycle” of dental fear/avoidance
 - Improve health outcomes
 - Improve patient quality of life
 - Reduce financial burden of costly procedures





Department of Psychology
Eberly College of Arts and Sciences
West Virginia University