

**A MULTILEVEL ANALYSIS OF THE VULNERABILITY,  
DISORDER, AND SOCIAL INTEGRATION MODELS  
ACROSS MULTIPLE DIMENSIONS OF FEAR OF CRIME\***

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## **PURPOSE OF THE ANALYSIS**

1. To determine which model—vulnerability, disorder, or social integration—best explains variation in fear across 21 cities
2. To determine how these models differentially function across cognitive and affective dimensions of fear

# **MEASURING FEAR OF CRIME**

## **Early Measures of Fear**

- Based on questions from the NCVS
- “How safe do you feel or would you feel walking alone in your neighborhood at night?”
- Abstract or “formless” measure
- Fails to distinguish between emotional fear and cognitive judgments about risk

## **Recent Developments**

- Fear is recognized as multidimensional
- Cognitive, Affective, Behavioral
- Operational definitions are “concrete” rather than “formless”

# **EXPLAINING FEAR OF CRIME**

## **Vulnerability Model**

Individuals who feel unable to protect themselves through physical, social, and/or economic resistance may report higher levels of fear

## **Disorder Model**

Perceptions of physical and social disorder will increase citizens' fear of crime

- disorder is viewed as inviting criminal activity to the neighborhood

## **Social Integration Model**

Individuals who are more socially integrated within their neighborhoods will experience less fear of crime

# METHODS

## Data

- 2599 citizens in 21 cities across the Eastern District of Washington
- 16 rural and 5 urban cities
- Collected by DGSS through PSN Grant

## Dependent Variables

### *Perceived Risk (Cognitive Dimension)*

- Two-item index
- “How safe would you feel walking alone during the day [night] in the area where you live?”
- Internal reliability: Cronbach’s alpha = .72

### *Worry of Victimization (Affective Dimension)*

- Seven-item index
- “How much do you worry about each of the following situations?”
  - Being sexually assaulted, attacked while driving, mugged, beaten up, etc.
- Internal reliability: Cronbach’s alpha = .89
- CFA indicates that worry and risk measures are in fact two separate constructs

# Individual-Level Variables

## *Vulnerability*

- Race (0 = white, 1 = nonwhite)
- Sex (0 = female, 1 = male)
- Age
- Income
- Education

## *Disorder*

- Eight-item index
- Respondents were asked to rate how serious the following problem were:
  1. Teens hanging out and harassing
  2. Public drunkenness
  3. Youth gangs present
  4. Noise
  5. Traffic problems
  6. Garbage/Litter
  7. Dogs running at-large
  8. Vandalism
- Internal reliability: Cronbach's alpha = .83

## *Social Integration*

- Four-item index
- “Would you describe the area where you live as a place where people help one another or a place where people mostly go their own way?”
- “Do you feel the area where you live is more of a real home or more like just a place to live?”
- “How often do you talk with your neighbors?”
- “When you do a favor for a neighbor, can you trust the neighbor to return the favor?”
- Responses were standardized due to differing metrics
- Internal Reliability: Cronbach’s alpha = .71

## **City-Level Variables**

- Violent Crime Rate (per 1000)
- Property Crime Rate (per 1000)
- Race (percent white)
- Education (percent with BA or higher)
- Unemployment (percent unemployed)
- Median Family Income
- Urbanism (0 = Rural, 1 = Urban)

**Table 1. Descriptive Statistics**

Variables	Mean	Standard Deviation
<i>Dependent Variables (N = 2599)</i>		
Perceived Risk	3.48	1.44
Worry of Victimization	14.95	4.02
<i>Individual-Level Variables (N = 2599)</i>		
Race	.93	.25
Non-White (0)	(6.5%)	
White (1)	(93.5%)	
Gender	.64	.48
Female (0)	(36.1%)	
Male (1)	(63.9%)	
Age	57.99	15.64
Income	6.12	2.03
< \$10,000 (1)	(1.4%)	
\$10,000-\$19,999 (2)	(3.0%)	
\$20,000-\$29,999 (3)	(5.7%)	
\$30,000-\$39,999 (4)	(9.2%)	
\$40,000-\$49,999 (5)	(8.8%)	
\$50,000-\$59,999 (6)	(34.5%)	
\$60,000-\$69,999 (7)	(16.3%)	
\$70,000-\$79,999 (8)	(5.3%)	
\$80,000-\$89,999 (9)	(3.5%)	
\$90,000 > (10)	(10.4%)	
Education	4.12	1.88
< High School (1)	(4.7%)	
High school graduate (2)	(18.0%)	
Some college (3)	(25.7%)	
Associate degree (4)	(8.4%)	
Bachelor degree (5)	(17.2%)	
Some graduate coursework (6)	(6.9%)	
Graduate degree (7)	(19.0%)	
Disorder	12.58	4.45
Social Integration	-.01	2.95
<i>City-Level Variables (N = 21)</i>		
Violent Crime Rate	2.95	1.52
Property Crime Rate	55.93	24.81
Race	83.67	12.74
Education	20.06	12.43
Unemployment	6.05	1.76
Median Family Income (1000s)	39.8	7.67
Urbanism	.24	.44
Rural (0)	(76.2%)	
Urban (1)	(23.8%)	

**Table 2. Intercept-only Hierarchical Linear Models for Perceived Risk and Worry of Victimization**

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<i>Variable</i>	<b>FIXED EFFECTS</b>	<b>RANDOM EFFECTS</b>	
	<i>Coefficient</i>	<i>Variance Component</i>	<i>Chi-Square</i>
Risk Intercept	3.309** (.078)	.102	457.100**
Worry Intercept	14.423** (.229)	1.066	3137.411**

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Note: Standard errors are in parentheses.

\*\* $p \leq .05$ ; \* $p \leq .10$ .

**Table 3. Theory-Specific Models of Perceived Risk and Worry of Victimization<sup>1</sup>**

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	<b>PERCEIVED RISK</b>		
	<i>Vulnerability</i>	<i>Disorder</i>	<i>Social Integration</i>
<u><b>FIXED EFFECTS</b></u>			
Intercept	4.673** (.146)	1.718** (.083)	3.349** (.070)
Race	-.350** (.080)		
Gender	-.800** (.041)		
Age	.006** (.001)		
Income	-.086** (.011)		
Education	-.087** (.011)		
Disorder Scale		.129** (.004)	
Social Integration Scale			-.145** (.007)
<u><b>RANDOM EFFECTS</b></u>			
Intercept			
Variance Component	.090	.057	.077
Chi-Square	377.314**	279.491**	354.830**

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**Table 3. Continued**


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	<b>WORRY</b>		
	<i>Vulnerability</i>	<i>Disorder</i>	<i>Social Integration</i>
<u>FIXED EFFECTS</u>			
Intercept	16.130** (.260)	10.747** (.193)	14.473** (.220)
Race	.019 (.081)		
Gender	-.917** (.041)		
Age	-.019** (.001)		
Income	.009 (.011)		
Education	-.017 (.011)		
Disorder Scale		.299** (.004)	
Social Integration Scale			-.142** (.007)
<u>RANDOM EFFECTS</u>			
Intercept			
Variance Component	1.052	.685	.978
Chi-Square	2948.272**	2071.323**	2820.136**

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<sup>1</sup>Total sample size is 2599 citizens and 21 cities.

Note: Standard errors are in parentheses.

\*\* $p \leq .05$ ; \* $p \leq .10$ .

**Table 4. Full Level-One Models Explaining Perceived Risk and Worry of Victimization**

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	<b>RISK</b>	<b>WORRY</b>
<u>FIXED EFFECTS</u>		
Intercept	2.367** (.161)	10.662** (.233)
Disorder	.106** (.005)	.292** (.005)
Social Integration	-.105** (.007)	-.043** (.007)
Race	-.168** (.081)	.314** (.081)
Gender	-.719** (.041)	-.731** (.041)
Age	.013** (.001)	-.007** (.001)
Income	-.034** (.011)	.108** (.011)
Education	-.062** (.011)	.032** (.011)
<u>RANDOM EFFECTS</u>		
Intercept		
Variance Component	.038	.623
Chi-Square	194.069**	1917.529**

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Note: Standard errors are in parentheses

\*\* $p \leq .05$ ; \* $p \leq .10$ .

**Table 5. Full Hierarchical Linear Models Explaining Perceived Risk and Worry of Victimization<sup>1</sup>**

	<b>RISK</b>	<b>WORRY</b>
<u>FIXED EFFECTS</u>		
Intercept	1.509* (.767)	9.702** (2.679)
Disorder	.106** (.005)	.292** (.005)
Social Integration	-.104** (.007)	-.043** (.007)
Race	-.169** (.081)	.313** (.081)
Gender	-.720** (.041)	-.731** (.041)
Age	.013** (.001)	-.007** (.001)
Income	-.034** (.011)	.108** (.011)
Education	-.062** (.011)	.032** (.011)
Violent Crime Rate	.057 (.033)	.353** (.127)
Property Crime Rate	.003 (.002)	.008 (.007)
Race	.003 (.004)	-.001 (.016)
Education	.002 (.004)	.007 (.017)
Unemployment	.028 (.043)	-.112 (.141)
Median Family Income	-.000 (.000)	.000 (.000)
Urbanism	.268** (.102)	.045 (.480)
<u>RANDOM EFFECTS</u>		
Intercept		
Variance Component	.009	.419
Chi-Square	20.719*	504.708**

<sup>1</sup> Total sample size is 2599 citizens and 21 cities.

Note: Standard errors are in parentheses.

\*\* $p \leq .05$ ; \* $p \leq .10$ .