

# Development of a Blood Donation Myths Scale in an African American Sample

Caitlin Burditt, Mark Robbins, Andrea Paiva, Cerissa Creeden  
Cancer Prevention Research Center, University of Rhode Island

Beryl Koblin & Debra Kessler  
New York Blood Center  
April 24, 2009

THINK BIG  WE DO™



# Introduction

- Supply of blood and blood products does not keep pace with demand
- Interventions to increase rates of blood donation must enhance the benefits (pros) and decrease the costs (cons) of donating blood
- Interventions must also counter negative myths/misperceptions about blood donation
- **Cons** are “real” potential consequences of blood donation
- **Myths** represent “false” beliefs that may impact the decision to donate

# Introduction

- Myths are important in the field of organ and tissue donation and may be applicable to blood donation
- Negative impact of belief in myths may be of particular concern among African Americans:
  - There is race-specific need for blood due to sickle cell disease incidence
  - African Americans are underrepresented in the donor pool
  - History of racial inequality within healthcare system
- Measurement of belief in myths is needed to develop interventions that counter them

THINK BIG  WE DO™



# Aims of the Present Study

- Apply the Transtheoretical Model of Behavior Change (TTM) to blood donation behavior
- Develop culturally tailored measures for Stage, Decisional Balance, and Confidence (self-efficacy)
- **Develop a myths scale for blood donation and determine relationship with TTM constructs**
- **Gain understanding of role myths may play in blood-donation decision**

THINK BIG  WE DO™



# Measurement Sample Characteristics

- 315 African Americans - range of donation experience (82.2% with hx of blood donation)
- Mean Age: 40.89 years (SD = 15.5); 60.4% female
- Education:
  - 33.3% high school or less,
  - 30% some college/associate's degree,
  - 36.7% college degree or higher
- Staging Distribution:
  - 32% Precontemplation
  - 28.4% Contemplation
  - 30% Preparation
  - 9.6% Action/Maintenance

THINK BIG  WE DO™



# Method

- Sequential approach to measurement development
  - Qualitative phase followed by quantitative analysis
  - Split-half procedure for survey sample
- Exploratory Factor Analysis conducted using PCA (N = 152)
- Confirmatory Factor Analysis conducted using structural equation modeling in EQS (N = 163)
- External Validation
  - Look at relationship between myths and TTM measures
  - Examine belief in myths by stage of change
  - Examine relationship between myths and medical mistrust (Medical Mistrust Index, LaVeist et al., 2001).

THINK BIG  WE DO™



# Exploratory Results: Myths

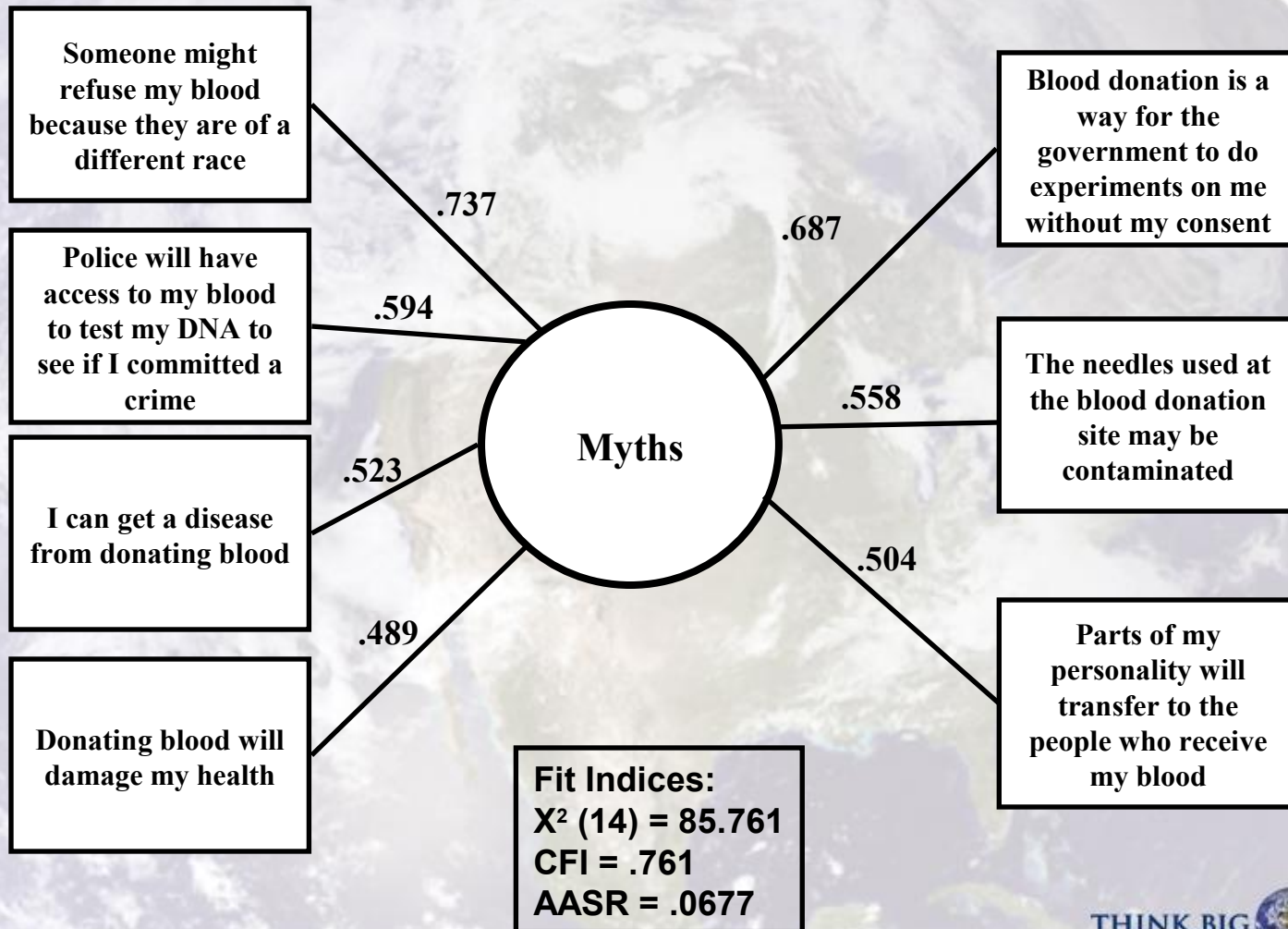
Myths of Blood Donation	Factor Loading
I can get a disease from donating blood	.834
Police will have access to my blood to test my DNA to see if I committed a crime	.747
Blood donation is a way for the government to do experiments on me without my consent	.723
The needles used at the blood donation site may be contaminated	.556
Someone might refuse my blood because they are of a different race	.551
Parts of my personality will transfer to the people who receive my blood	.533
Donating blood will damage my health	.508

Coefficient Alpha = .753

THINK BIG  WE DO™



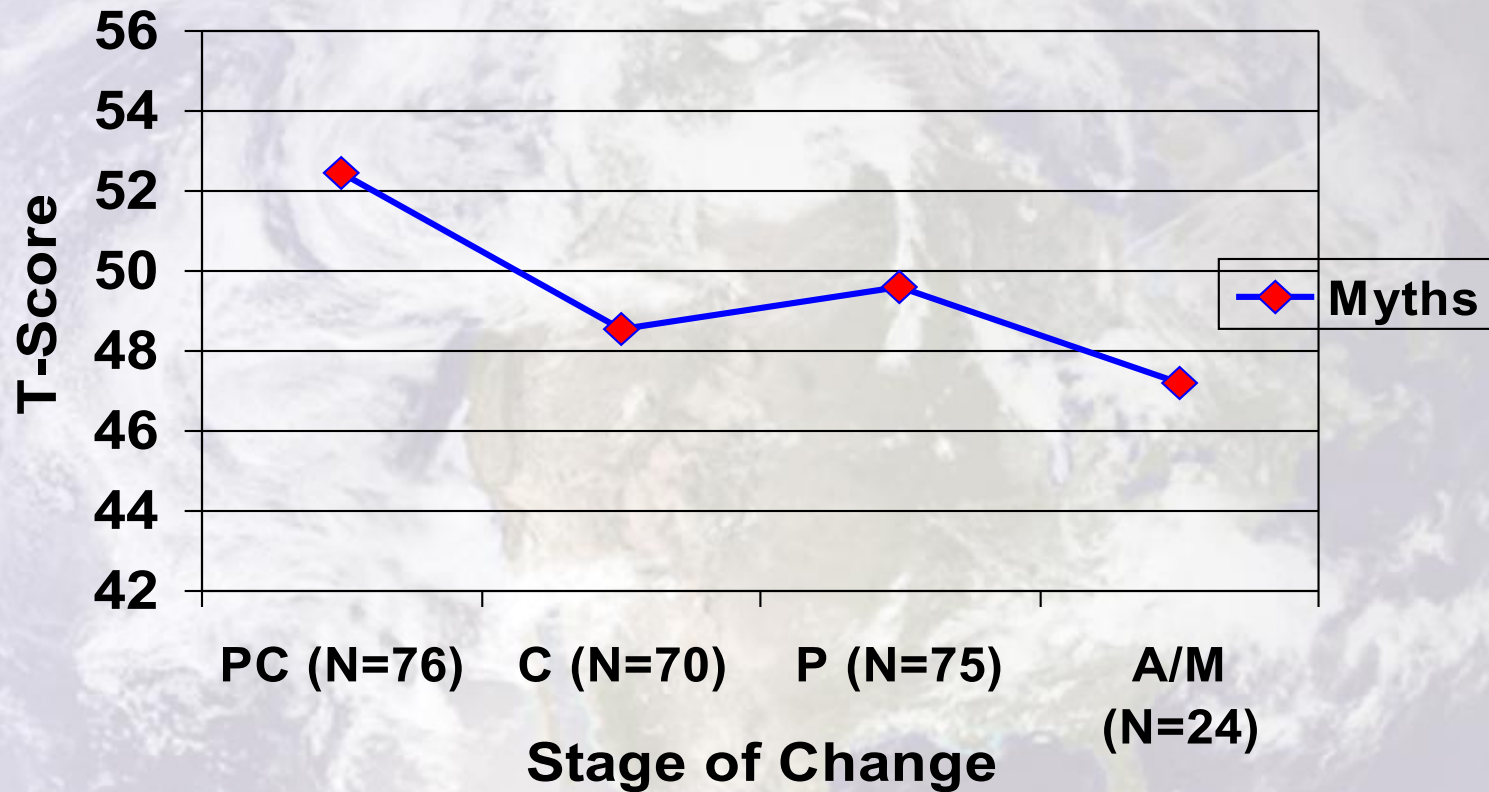
# Confirmatory Myths Model



THINK BIG  WE DO™



# Myths Across Stage



\*Significant decrease by Stage but no differences in follow up tests

THINK BIG  WE DO™

# Correlations

	<b>Myths</b>	<b>Medical Mistrust</b>	<b>Pros</b>	<b>Physical Cons</b>	<b>Eligibility Cons</b>	<b>Confidence</b>
<b>Myths</b>	1.0	<b>.392**</b>	<b>-.071</b>	<b>.177**</b>	<b>.182**</b>	<b>-.088</b>
<b>Medical Mistrust</b>	<b>.392*</b>	1.0	<b>-.015</b>	<b>.176**</b>	<b>.146**</b>	<b>.075</b>
<b>Pros</b>	<b>-.071</b>	<b>-.015</b>	1.0	<b>-.134*</b>	<b>.223**</b>	<b>.221**</b>
<b>Physical Cons</b>	<b>.177**</b>	<b>.176**</b>	<b>-.134*</b>	1.0	<b>.118*</b>	<b>-.047</b>
<b>Eligibility Cons</b>	<b>.182**</b>	<b>.146**</b>	<b>.223**</b>	<b>.118*</b>	1.0	<b>.066</b>
<b>Confidence</b>	<b>-.088</b>	<b>.075</b>	<b>.221**</b>	<b>-.047</b>	<b>.066</b>	1.0

\*\*Significant at the .01 level

\* Significant at the .05 level

THINK BIG  WE DO™



# Discussion

- Preliminary support for development of a Myths Scale for blood donation
- Exploratory results look better than Confirmatory & item loadings change drastically between samples
- May be just a few important myths to counteract rather than entire scale
- More qualitative and quantitative work is needed

THINK BIG  WE DO™

