

Cognitive Mechanisms Underlying the Effects of Behavioral Interventions on Increasing the Intention to Give Blood



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Introduction

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- Public health campaigns, physicians, and dentists recommend several health-related behaviors
- Many are reticent for a variety of reasons
- Example of medical and dental check-ups, colonoscopies, etc.
- Could very brief interventions increase people's intention of engaging in a health-related behavior, and if so, what are the psychological mechanisms involved?

Introduction

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- Most common means of encouraging health behaviors (especially those with an aversive aspect) is providing information
 - At present, often done via the internet
- One condition in the present study examined whether providing extra information about blood donation increased subsequent intention to give blood

Introduction

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- We selected blood donation as the health-related behavior we wished to examine
 - Crucial importance of bolstering blood supply
 - Contains several aversive components
- Can brief training in certain stress-reduction procedures increase one's intention to give blood?
 - 2 other conditions aiming to increase confidence
 - ✦ Learning a brief relaxation exercise
 - ✦ Learning the muscle tension technique Applied Tension (AT)

Methods

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Participants

- 199 college students
- Healthy adults between 18-30
- Met HQ eligibility criteria
- Had never given blood in the past

Methods - *Timeline*

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1. Basic demographics questions
2. One of four treatment groups

Condition 1: No-Treatment Control

- Sat quietly for 20 mins

Condition 2: Education

- Browsed the educational website of the UK's National Blood Service for 20 mins

Condition 3: Relaxation

- Browsed website for 10mins
- Practiced a relaxation exercise for 10mins

Condition 4: AT

- Browsed website for 10mins
- Learned and practiced Applied Tension (AT) for 10mins

Methods - *Timeline*

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- 3. Watched 3 videos (blood draws/injections)
- 4. Completed the Theory of Planned Behavior questionnaire
 - 1. Main outcome variable: Intention to give blood
 - 2. Mediating variables: Social Norm, Moral Norm and Perceived Behavioral Control

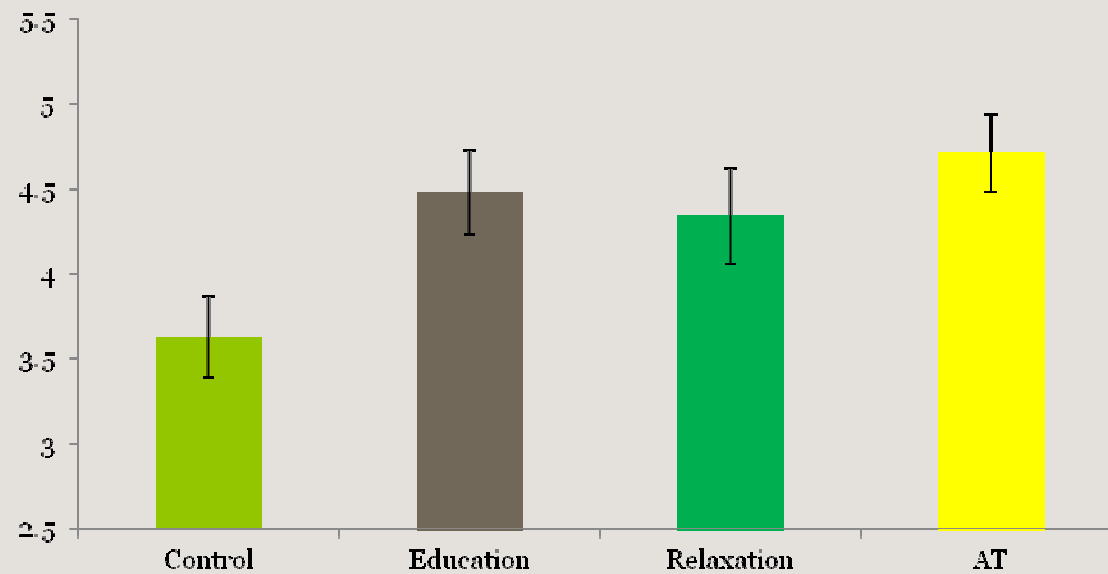
Results

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Main effect of Condition

$F(3, 195) = 3.73, p = .012$

Intention



Results

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- Mediation analyses

- 1. IV

- 1. Experimental condition (relaxation, AT, web browsing)

- 2. Mediating Variables

- 1. Social Norm
 - 2. Moral Norm
 - 3. Perceived Behavioral Control

- 3. DV

- 1. Intention to give blood

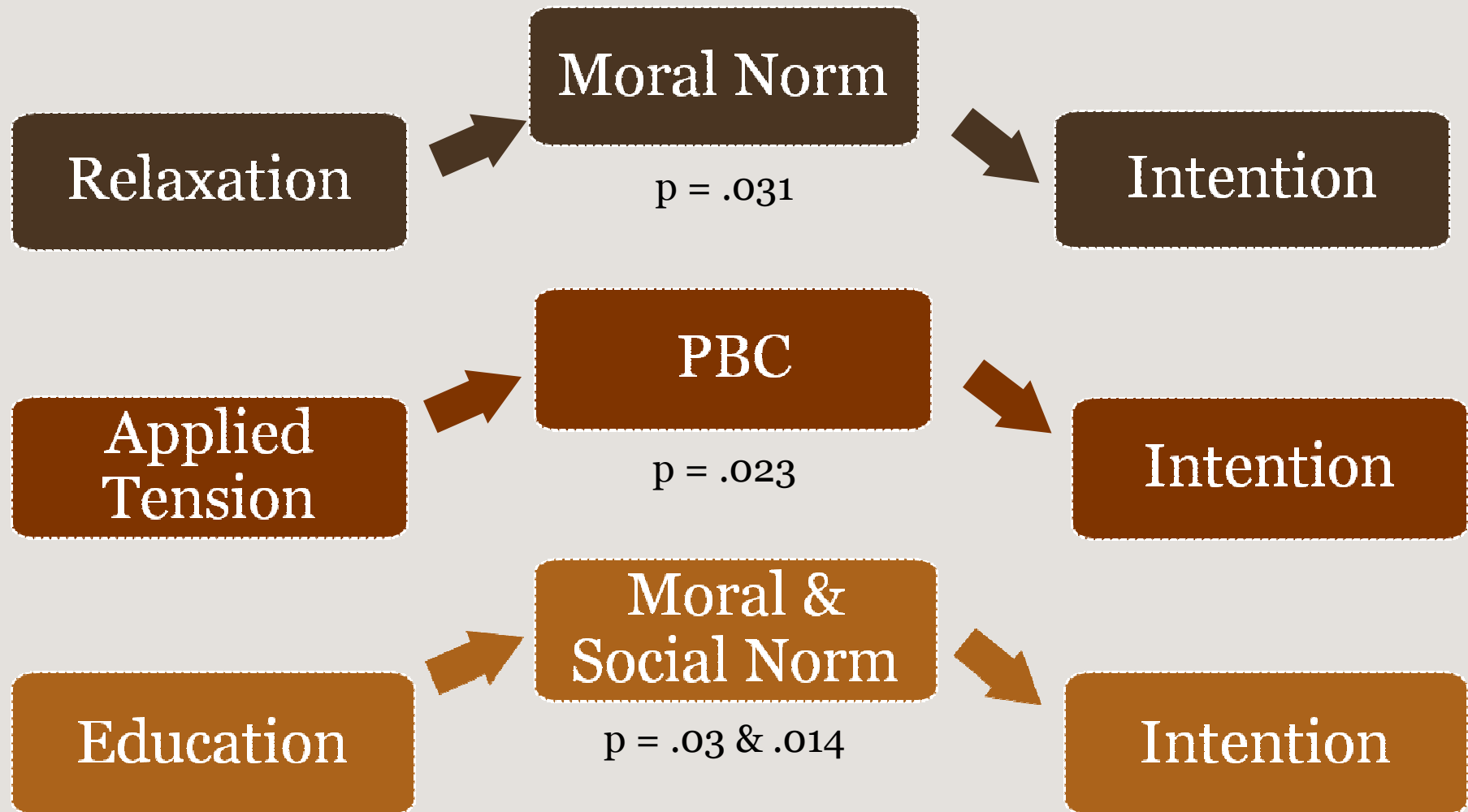
Results

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- Theory of Planned Behavior questionnaire (TPB)
 - **Social Norm**
 - ✦ “The people who are most important to me think I should give blood” (strongly agree → strongly disagree)
 - **Moral Norm**
 - ✦ “It is in accordance with my principles to give blood” (strongly agree → strongly disagree)
 - **Perceived Behavioral Control**
 - ✦ “I am confident that I can overcome the obstacles that could prevent me from giving blood” (strongly agree → strongly disagree)

Results: Sobel Test (Baron & Kinney)

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Discussion

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- Behavioral interventions increase non-donors' intention to give blood
 - And different interventions influence intention through different means
- Results may be generalizable to other health-related behaviors that contain an aversive component
- Possibility of designing *specific* interventions to target the *specific* barriers associated with different health behaviors

Limitations

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- Most important caveat: we were only measuring intention, not actual donation behavior
 - Follow-up with HQ in 2 years
- Issue of social desirability
 - Reading stories of real people who benefitted from blood donation could have inflated ratings of intention
 - ✦ Follow-up in 2 years will allow us to differentiate whether this was a very temporary effect of social desirability, or whether it actually had a longer-lasting impact on moral norm

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Fonds de la recherche
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CIHR IRSC
Canadian Institutes of Health Research
Instituts de recherche en santé du Canada



Results

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- Mediation test used: Sobel test
 - 1- Establish path “c”: IV to DV
 - 2- Establish path “a”: IV to M
 - 3- Establish path “b: IV+M to Y
 - 4- When M is added to the model, relationship X to Y (path c’) is significantly reduced → M is “carrying the weight” of the relationship between IV and DV

