



Prayer and pain:

The mediating role of cognitive re-appraisal

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More information:

Dezutter, J., Kryszyska, K., & Corveleyn, J. (in press). Religious factors in pain management: A psychological perspective. *Journal of Anesthesia and Clinical Research, Special Issue Pain Management*.

Dezutter, J., Wachholz, A., & Corveleyn, J. (2011). Prayer and pain: The mediating role of positive re-appraisal. *Journal of Behavioral Medicine*, 34, 542-549.

Acknowledgments:

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Chronic pain

- A devastating and widespread problem in Europe:
 - **19%** of the adult population suffers from **CP**
 - average duration **7 years**
 - **20% jobloss** due to pain condition
 - **20%** diagnosed with **depression**
 - 50% reports feeling **helpless**, unable to function normally
 - **17% suicidal** ideas due to pain condition

Chronic pain

- Traditional pain management strategies:
 - not always pain relief or increase life quality
- Focus on effectiveness of complementary pain relief strategies
- → increasing interest in spiritual and religious resources

Chronic pain

- Chronic pain seems to alter the role of religion/spirituality in patients' lives:
 - 40% of patients report to be more religious after the onset of CP
(Glover-Graff et al., 2007)
 - religious factors are often used in coping with pain
(Turner & Clancy, 1986)
 - prayer is a frequent response to pain
(Glover-Graff et al., 2007)

Chronic pain and prayer

- suboptimal effect of traditional pain relief strategies

+

- interest of patients in religious factors

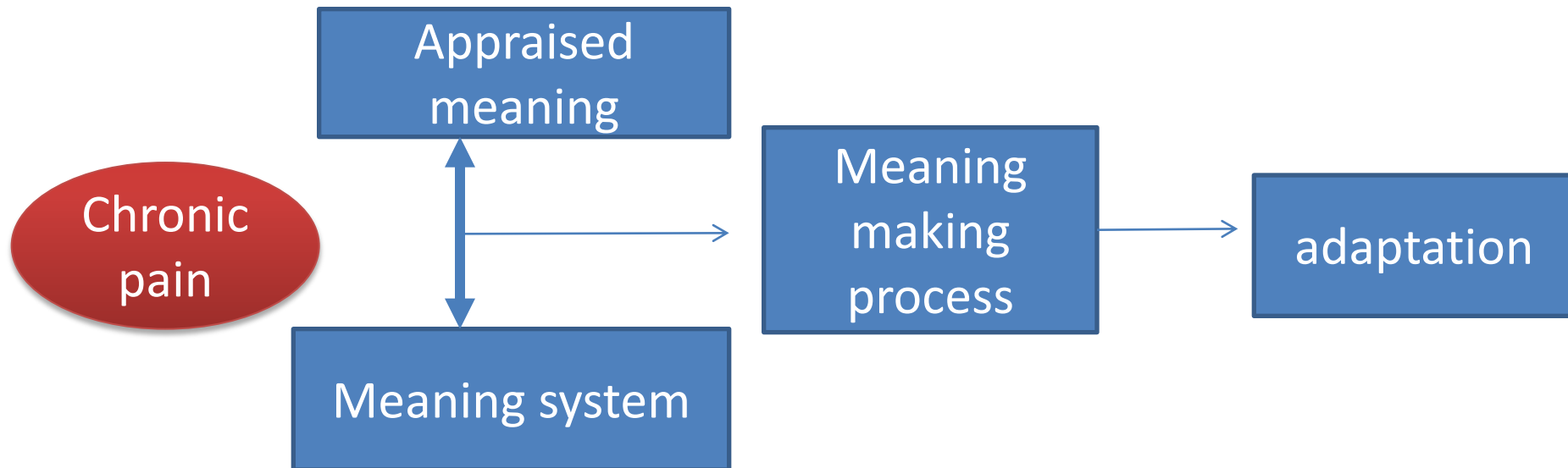
→ research on usefulness of religious factors is warranted

Theoretical model

- Meaning making model (Park, 2010 for an overview)
 - adaptation of traditional stress and coping models (e.g. Lazarus & Folkman)
 - focus on unsolvable, chronic stressors → no problem-solving
 - theme of ‘meaning’ is very relevant in these stressors
 - CP fits the definition of an unsolvable, chronic stressor

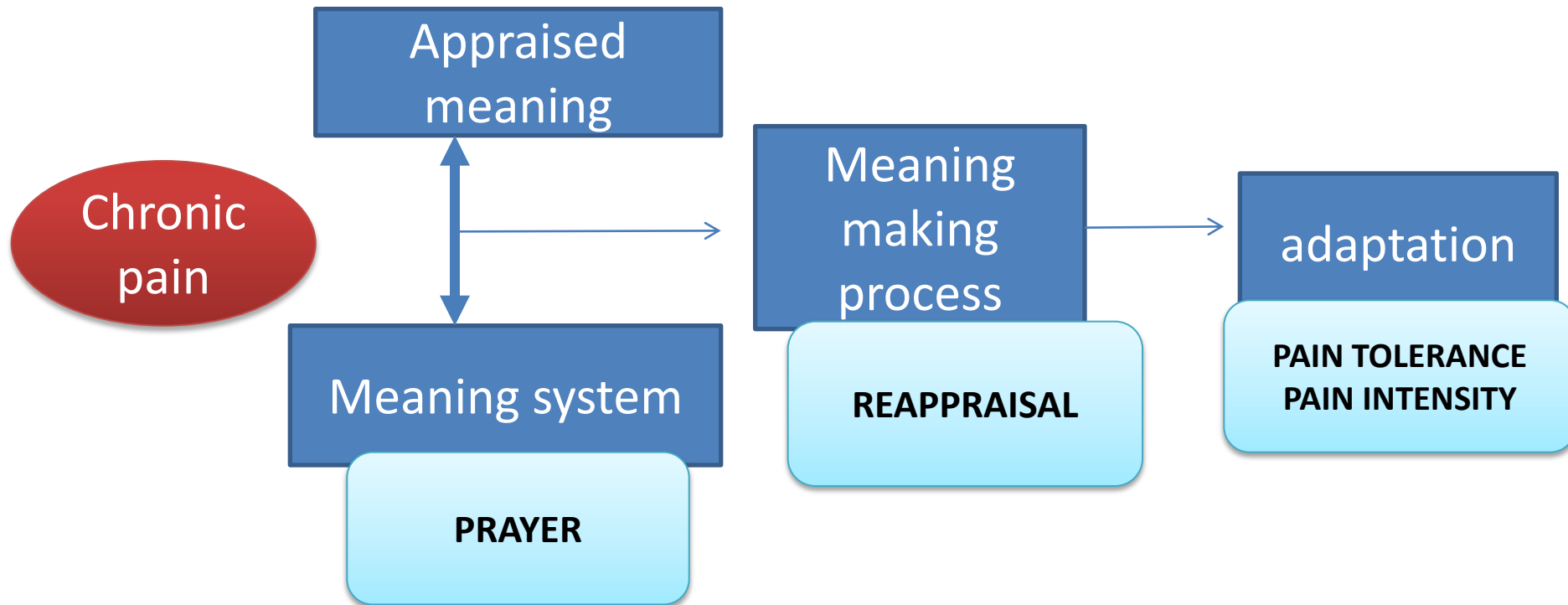
Theoretical model

- Meaning making with chronic pain



Theoretical model

- Meaning making with chronic pain

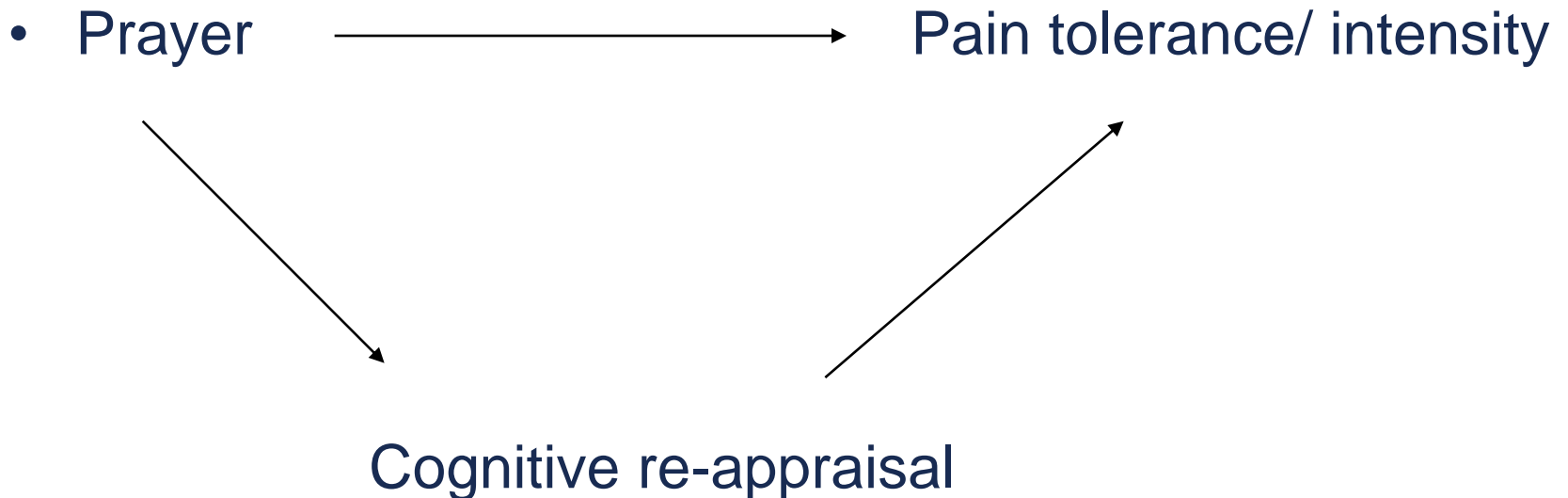


Purpose of the study

- Is prayer a valuable psycho-social coping mechanism for those experiencing chronic pain?
 - prayer as cognitive act: reframing the pain experience based on the religious framework
 - underlying mechanism: cognitive processing stimulates healthy adaptation
 - focus on pain tolerance and on pain severity

Purpose of the study

Is prayer a cognitive reappraisal act for pain patients?



Method of the study

- 202 CP patients filled out questionnaires
 - Socio-demographic variables
 - Pain :
 - pain duration
 - pain severity (Bush et al., 1999)
 - pain tolerance (Disability Scale of Chronic Pain Grade Questionnaire, Von Korff et al., 1992)
 - Prayer:
 - Frequency of prayer activity
 - Cognitive reframing
 - Cognitive re-appraisal (Positive Re-interpretation and Growth Scale, Carver, et al. 1989)

Results:

correlations between the study variables

	Pain severity	Pain tolerance	Prayer	Re- appraisal	Pain duration	Age	Education
Pain severity	-						
Pain tolerance	-.41**	-					
Prayer	-.01	.18*	-				
Re-appraisal	-.12	.45**	.33**	-			
Pain duration	-.05	.12	.08	.04	-		
Age	-.02	.05	.24**	.06	.40**	-	
Education	-.15	.15	.05	.02	.06	-.13	-

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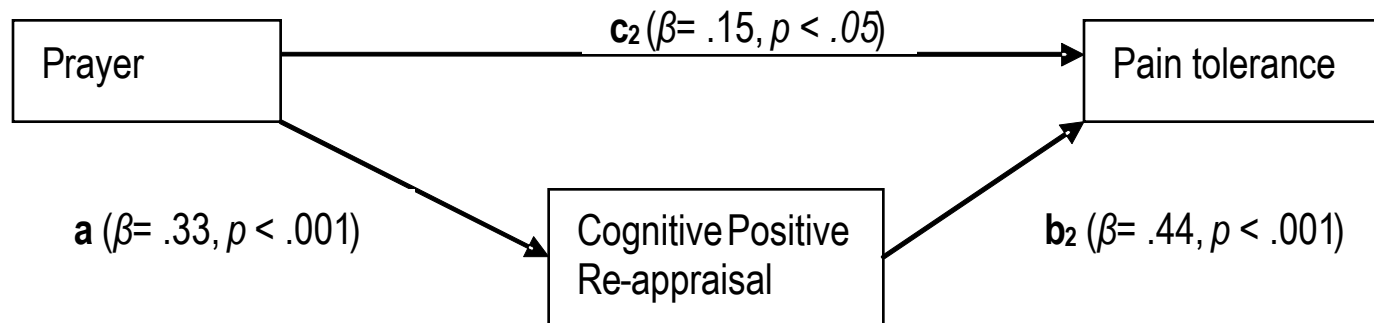
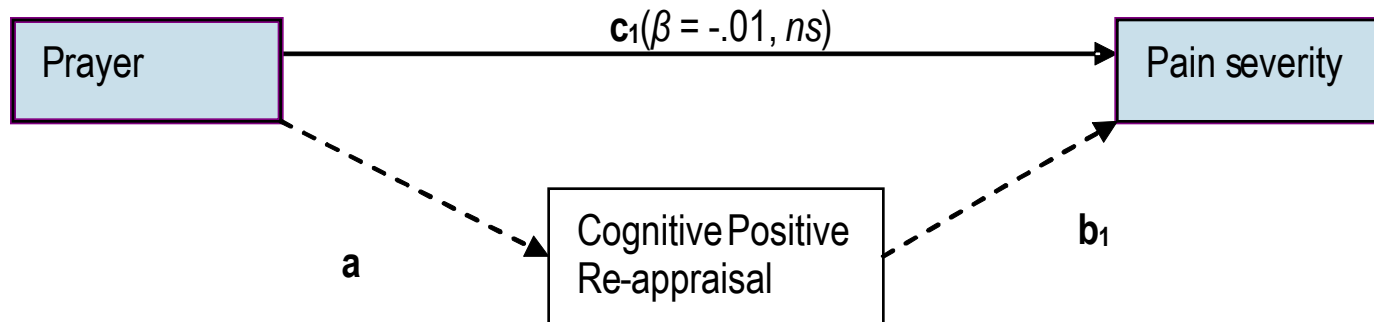
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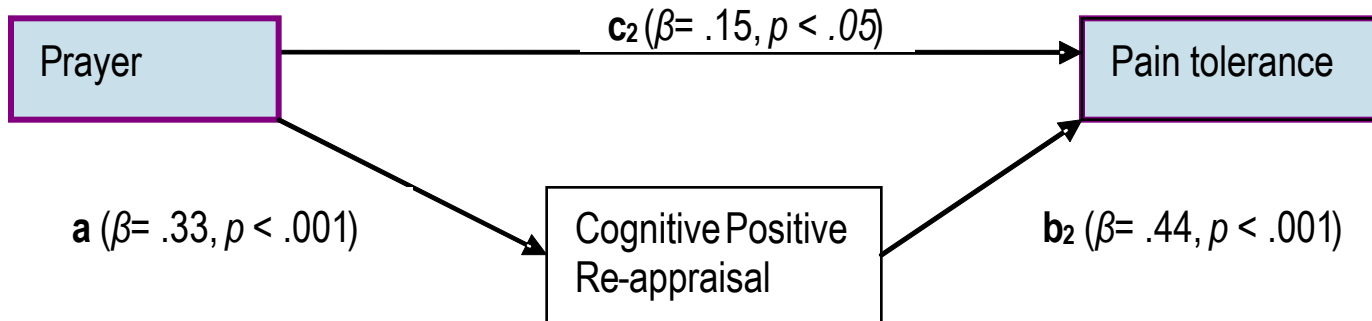
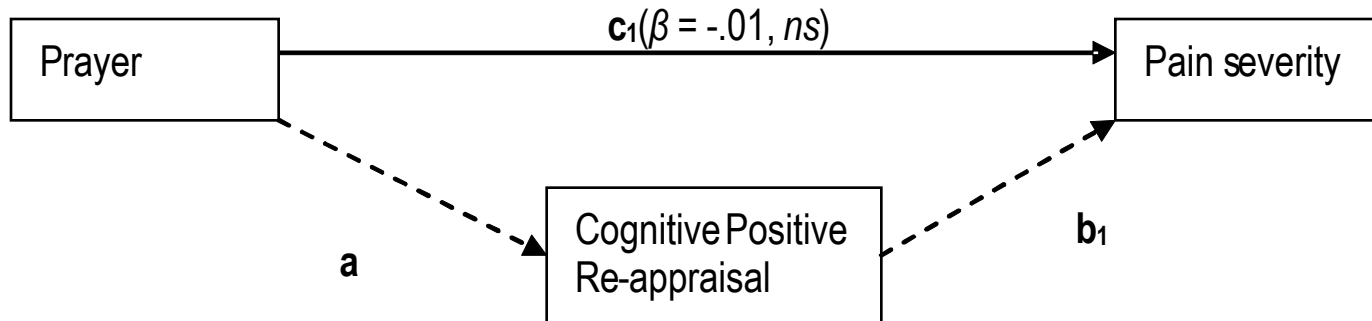
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Results:

Mediational analyses (Baron & Kenny)

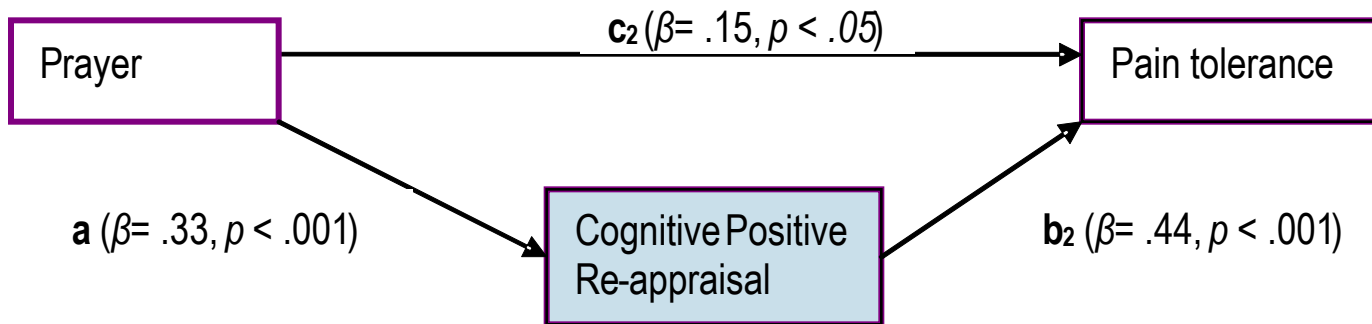
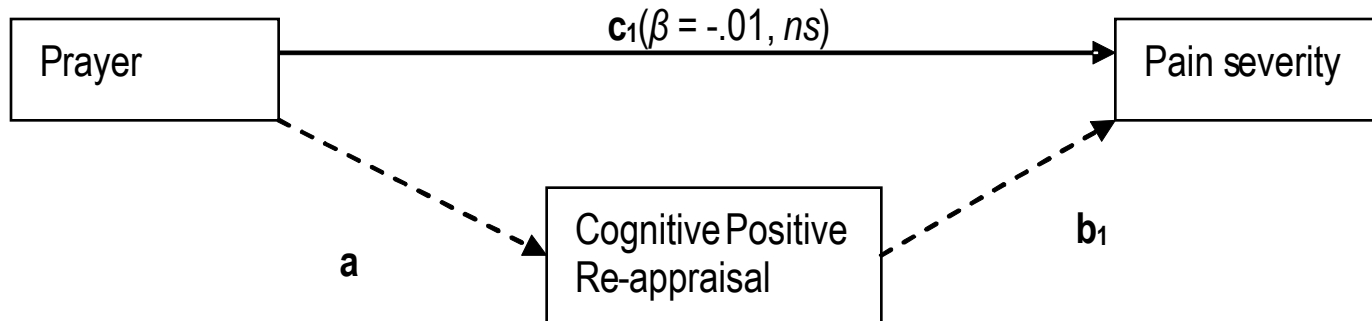


Results: Mediational analyses



Results:

Mediational analyses (Preacher & Hayes, 2004)



Results:

Mediational analyses

- Bootstrapping methodology (Preacher & Hayes, 2004)
 - Indirect effect of cognitive re-appraisal is significant (*point estimate* = .11, 95% BC CI: .06 to .16 with 3000 resamples)
 - The relation between prayer and pain tolerance may be mediated by re-appraisal

Results:

Moderation analyses

- Ancillary analyses:

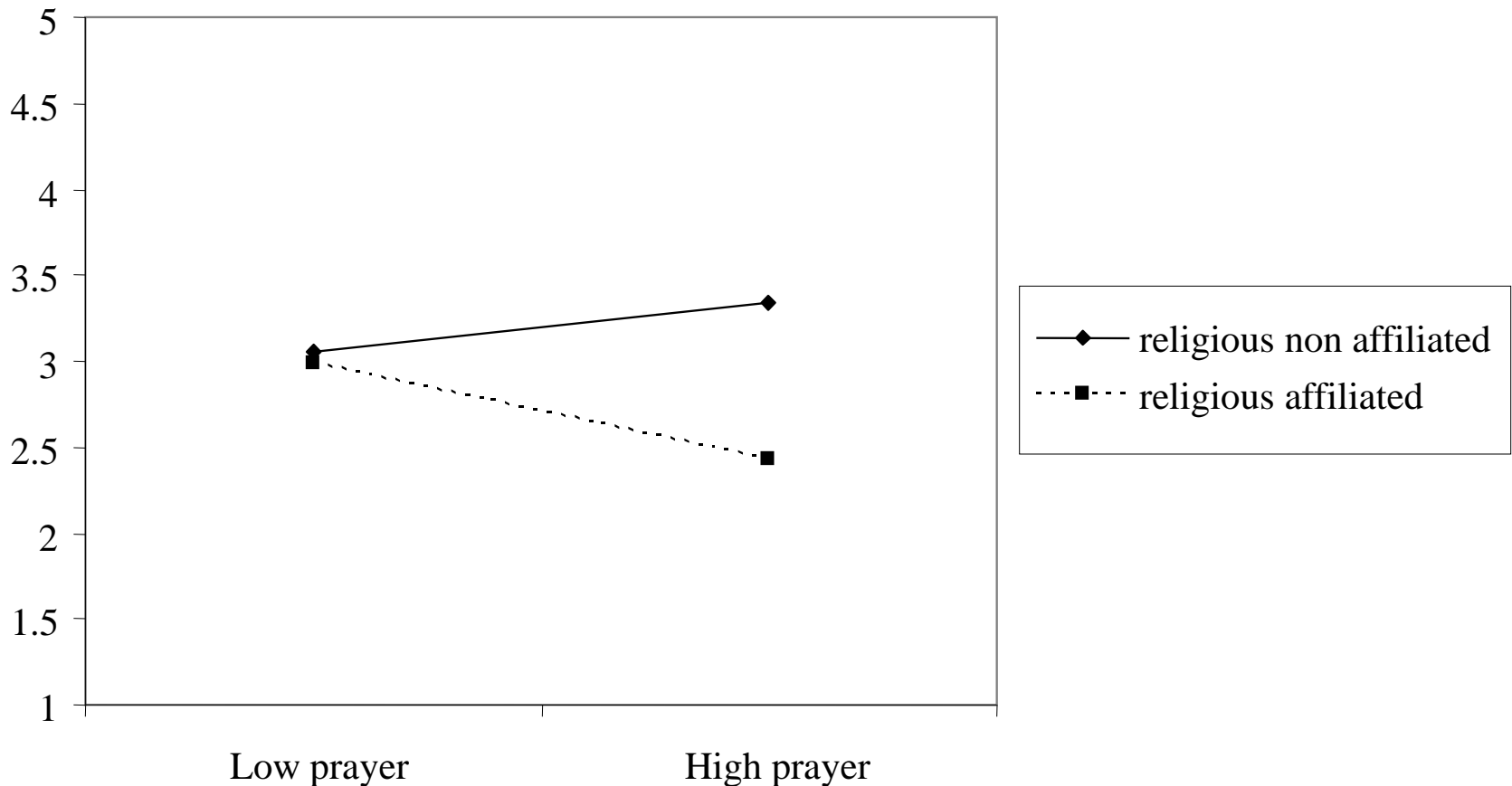
“what is the role of religiosity?” (belief salience/centrality of belief)

→ earlier studies showed that religious aspects are important in pain management especially for religious patients (Dezutter, et al., 2010)

- Moderation effect of religiosity

Results: Moderational analyses

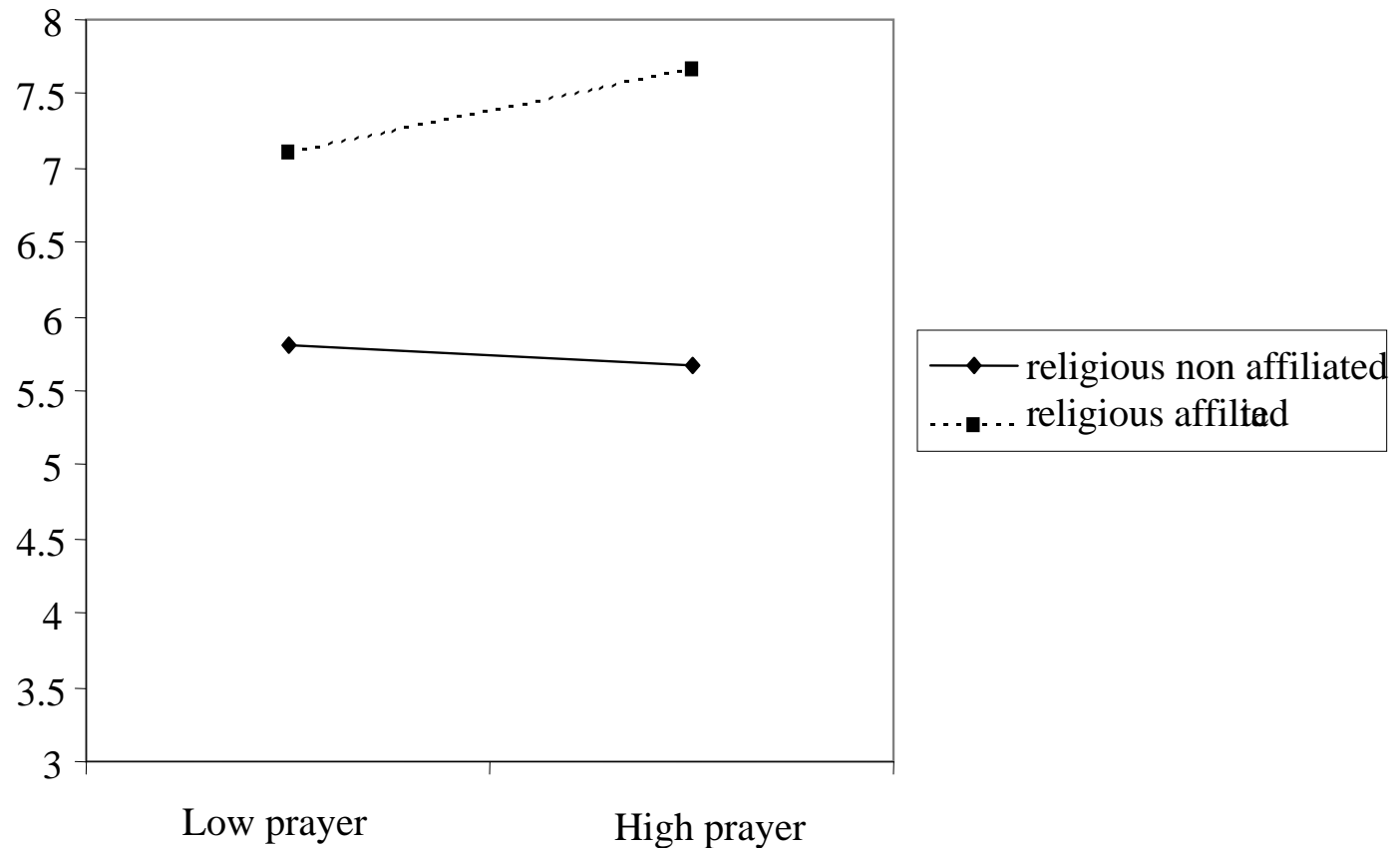
pain intensity



Results:

Moderational analyses

Pain tolerance



Conclusion

1. prayer is positively related to pain
 - relationship between prayer and pain severity/ pain tolerance is depending on the religiosity of the patient
 - for believers high levels of prayer were related with lower levels of pain severity and higher levels of pain tolerance (vs non believers)
 - prayer can be a useful factor in pain management but only for pain patients who are religious

Conclusion

2. positive re-appraisal mediated the relationship between prayer and pain tolerance

- prayer seems to function as a positive re-appraisal technique for the CP patient
- the underlying psychological/cognitive process alters the impact of pain on daily life activities

Limitations

- Patients are members of patients' association
- Frequency of prayer is too 'simple' as operationalization
 - Types of prayer (Poloma & Pendleton, 1991)
 - Content of prayer
 - Attitudes toward prayer (Krause, 2004)
 - Prayer as connection (Ladd & Spilka, 2002, 2004)
 - ...
- Cross-sectional character of the study

- Thank you for your attention!
- Suggestions, comments, etc. are welcome.