

# A MODEL OF PSYCHOSOCIAL INFLUENCES ON ADHERENCE TO STANDARD PRECAUTIONS

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# CONFLICT OF INTEREST

- Neither authors have conflicts of interest nor funding to declare for this study
- Ethical approval was granted for the conduct of this study

# BACKGROUND

- Despite their inception in the early 1980s, adherence to SP remains suboptimal
- Many factors have been described as having an influence on adherence
- Studies used:
  - Direct observations
  - Cross sectional
  - Theoretical models such as:
    - Health belief model
    - Social Cognitive theory
    - Theory of Reasoned Action/Planned Behaviour
- All have strengths and weaknesses – Effects mostly unquantified
- Many studies atheoretical

# THEORY OF PLANNED BEHAVIOUR

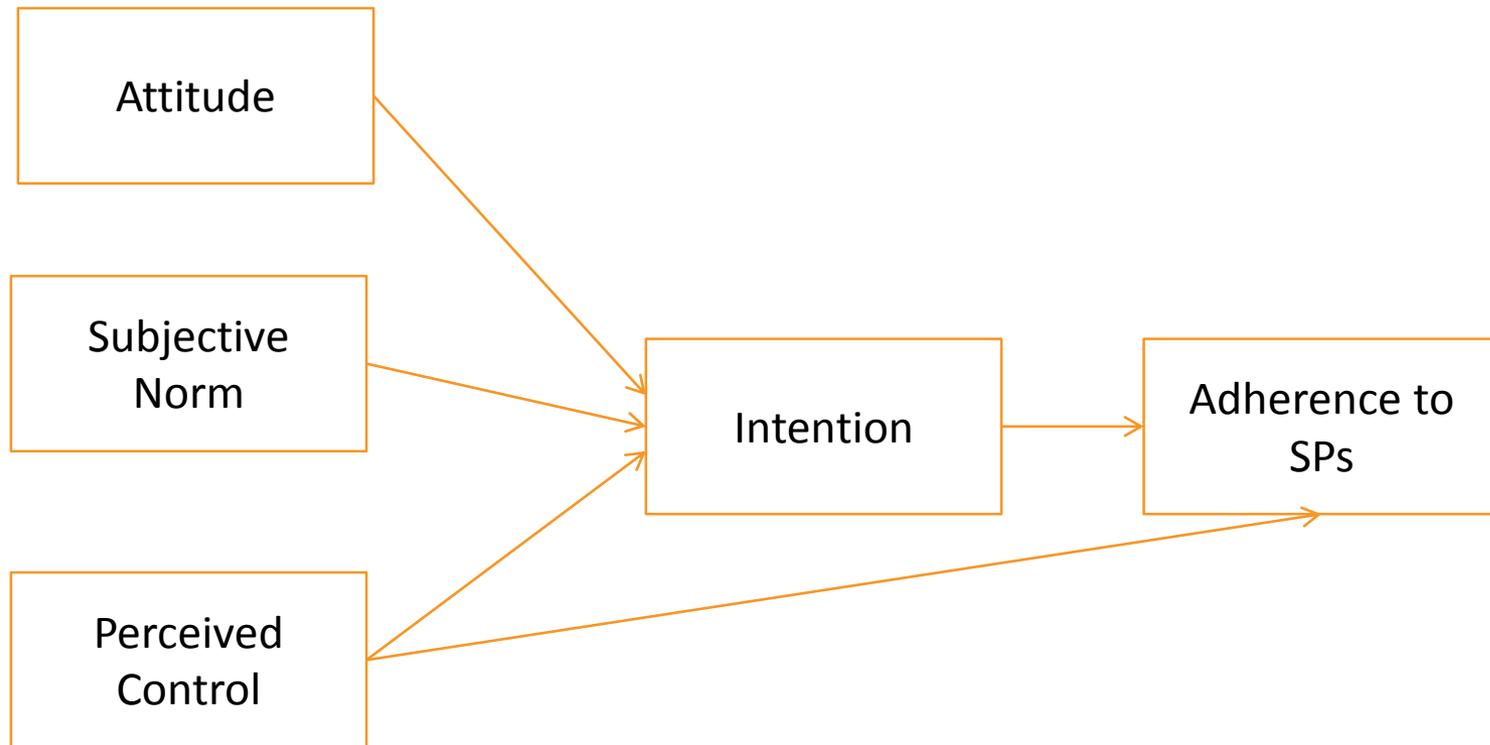
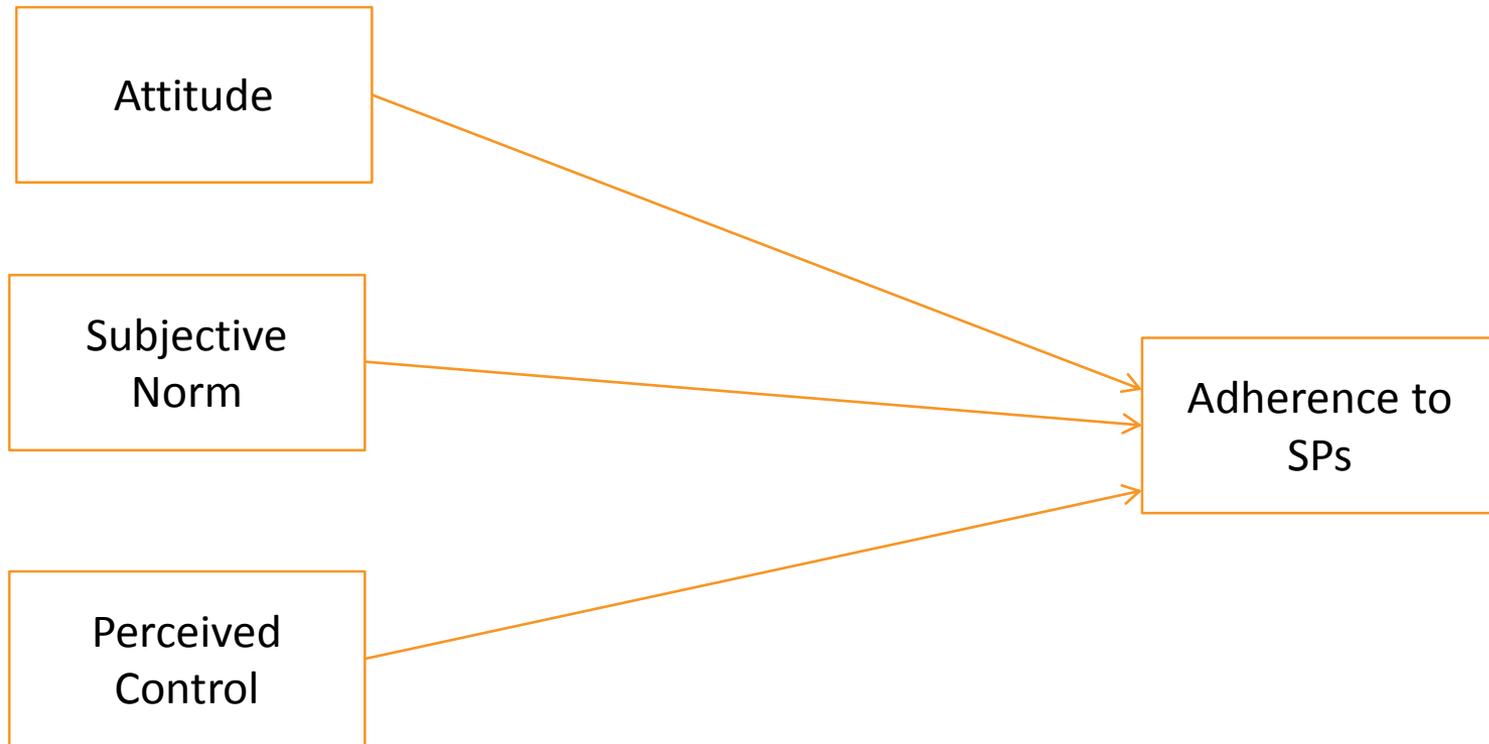
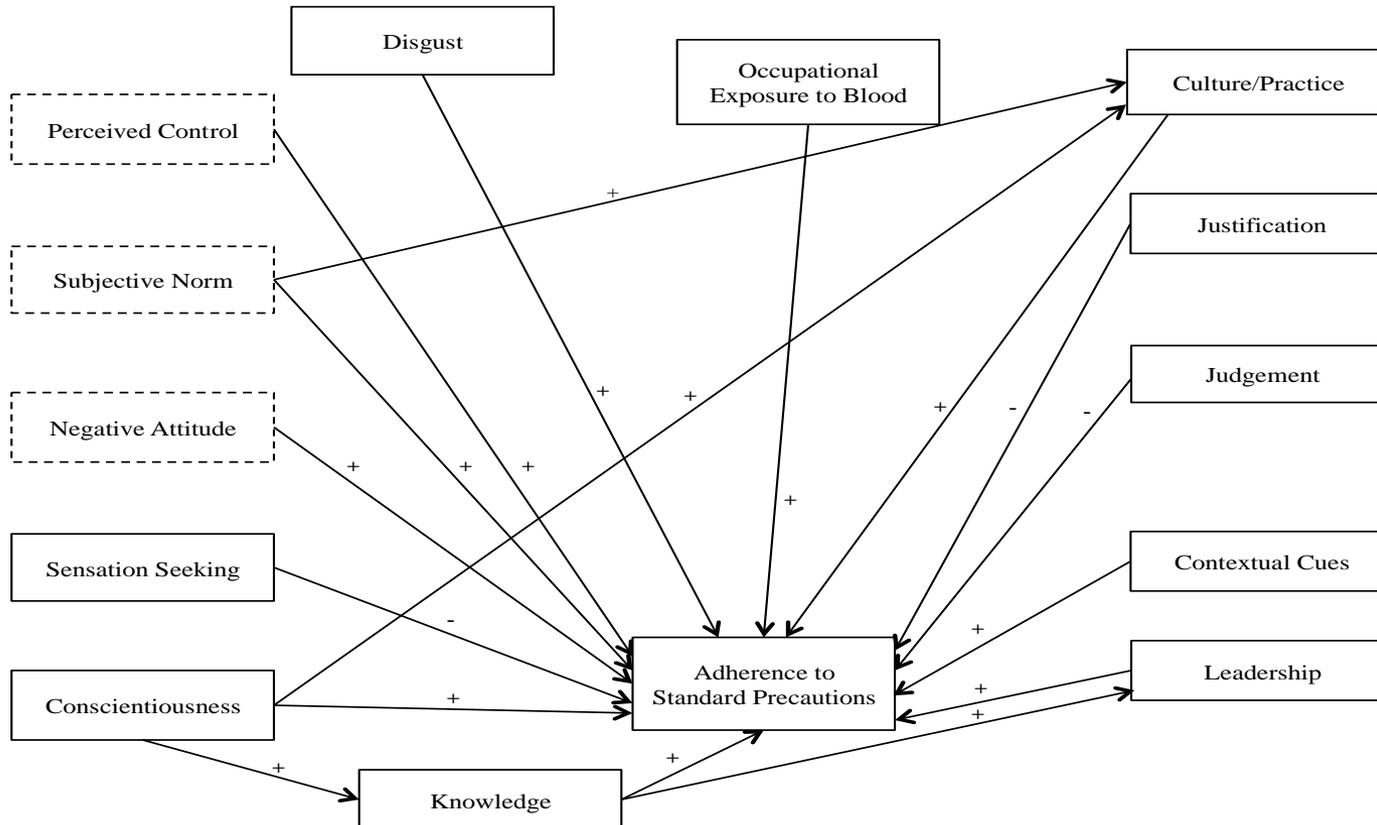


Figure 1: Theory of Planned Behaviour– Adapted from “The Theory of Planned Behavior ” by I. Ajzen, 1991, *Organizational Behavior and Human Decision Processes*, 50(2), p.182.

# TPB ADAPTED TO THE STUDY



# PROPOSED MODEL



# AIMS OF THIS RESEARCH

- To test a model of adherence to Standard Precautions among healthcare workers
- To determine which factors are significant contributors to adherence
  - Basis: Theory of planned behaviour
  - Extended with factors identified from the literature
  - And the Factors Influencing Adherence to SP Scale (FIASPS) developed in previous research

# METHOD

- 250 participants
- Age 25 to 66 ( $M$  age = 44.40 years,  $SD$  = 9.60)
- 31 males (12.4%) ( $M$  age = 43.67 years,  $SD$  = 9.84)
- 219 females (87.6%) ( $M$  age = 44.55 years,  $SD$  = 9.58)
- No gender difference on age  $t(248) = -.47, p = .64$ , two-tailed
- 6 medical doctors and 244 nurses
- Work area by gender

Work Area	Male (Percentage)	Female (Percentage)
Critical Care Areas	61.3	71.2
Emergency Department	6.5	10.5
Medical Care	6.5	1.8
Surgical Care	3.2	1.8
Community		.5
Gerontology/Rehabilitation/Long Term Care		.9
Mental Health	3.2	.5
Admission Ward	3.2	
Theatre/Operating Room/Anaesthesia		1.4
Other	16.1	11.4
Total	100%	100%

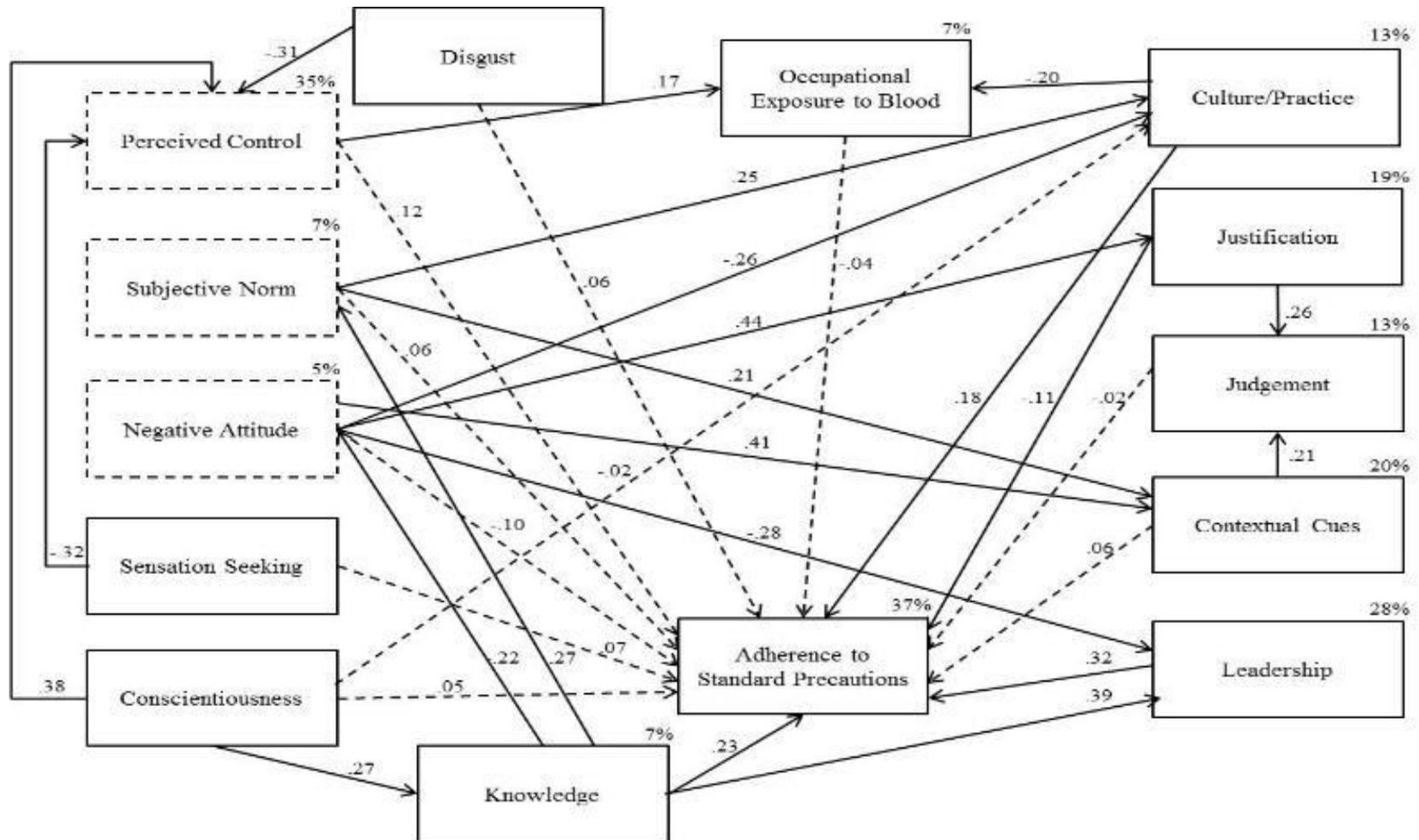
# PROCEDURE

- Email from the NT Department of Health Principal Nurse to all NT Senior Nurses
- NT senior nurses disseminated the invitation to their networks
- NT Senior Medical Officer sent an email to the NT Medical Staff.
- The NT General Practitioners Education Network placed an advertisement in the NTGP Education Network
- An invitation to participate in the study was also distributed via to members of the Australian Association of Critical Care Nurses (AACCN).
- A snowball sample was also used, via Social media sites, such as Facebook
- All participants completed an online questionnaire

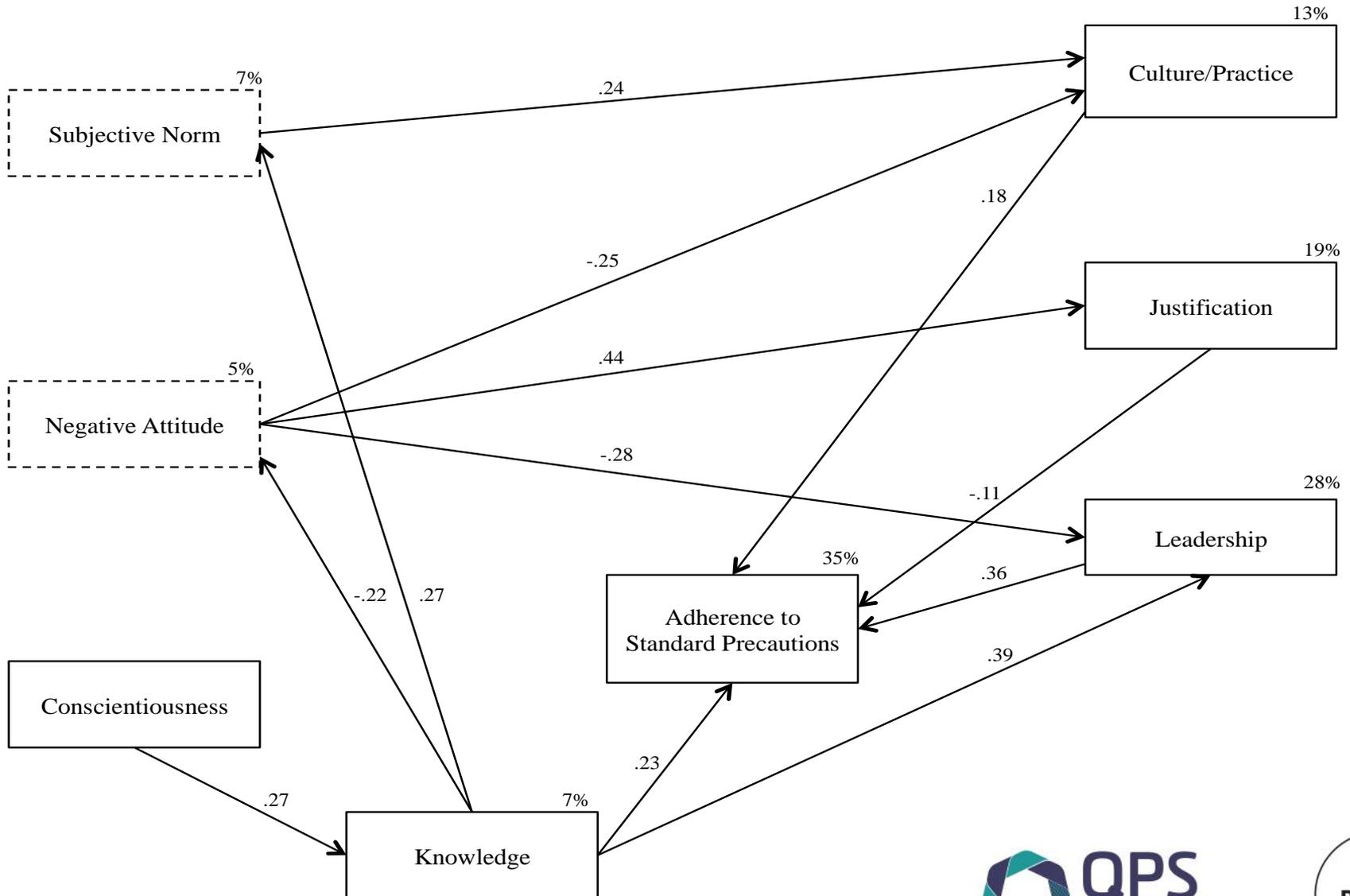
# MEASURES

- **ImpSS** (Zuckerman et al. 1993) 2 Factors – Only one administered: Sensation Seeking ( $\alpha = .88$ )
- **FIASPS** (Bouchoucha & Moore, 2014) five factors, 25 item scale 5 factors: Judgement ( $\alpha = .67$ ), Leadership ( $\alpha = .86$ ), Culture/Practice ( $\alpha = .60$ ); Contextual Cues ( $\alpha = .67$ ) & Justification (for not using) ( $\alpha = .72$ )
- **Disgust Propensity and Sensitivity Scale** (Cavanagh & Davey, 2000;  $\alpha = .65$ )
- **Adherence** – 4 items written for the study ( $\alpha = .60$ )
- **Conscientiousness** factor of the HEXACO Personality Inventory (Lee & Ashton, 2004 ; $\alpha = .77$ )
- Previous **OEB**
- **Perceived Control, Subjective Norm, Attitudes** – Items written for the study ( $\alpha = .70$ ;  $\alpha = .72$  and  $\alpha = .65$ )

# RESULTS (AFTER MODIFICATIONS)



# PARSIMONIOUS MODEL



# RESULTS

## Model Fit:

$\chi^2_{16} = 32.29$ ,  $p = .009$ ,  $\chi^2/df = 2.018$ , GFI = .969, AGFI = .930, NFI = .911, CFI = .951, RMSEA = .064  $p_{close} = .214$ , and SRMR = .063

35% of the variance explained in **adherence** to Standard Precautions

## Direct effects:

- Leadership ( $\beta = .36$ ), Knowledge ( $\beta = .23$ ) and Culture/Practice ( $\beta = .18$ ) had a positive effect on adherence to SP
- Justification (for not using) ( $\beta = -.11$ ) had a negative effect on adherence to SP

## Indirect effects:

- Subjective Norm had an indirect effect ( $\beta = .04$ ) on adherence through Culture/Practice
- Negative Attitude had a negative indirect effect on adherence through culture, Justification, and Leadership for a total effect of  $\beta = -.19$
- Conscientiousness had a positive and indirect effect on Adherence through Knowledge ( $\beta = .06$ )

# DISCUSSION

- The model shows:
  - **Knowledge** of guidelines enables greater leadership through proactivity in the workplace
  - In turn, **Education** reduces the concept that people can **judge** a patient/situation – removes the risk assessment based on irrational stereotyping
  - **Decrease** the personal **justification** for not using SPs and improves the negative attitude towards using SPs
  - **Culture** of the organisation needs to be such that it encourages adherence
- Three pronged approach – Education is not enough!
  - Individual
  - Organisation
  - Educational organisations

# FUTURE RESEARCH

- Adherence measured by self report - ? Social desirability
- Disgust - ? Scale need to be designed specifically in view of recent research – DPSS might not be specific enough to healthcare workers (Jackson and Griffiths, 2014)
- Previous OEB - Clarity
- More medical doctors in the sample
- Sample heavily skewed towards critical care nurses
- Prospective – before and after

# QUESTIONS?

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# FIASPS

