

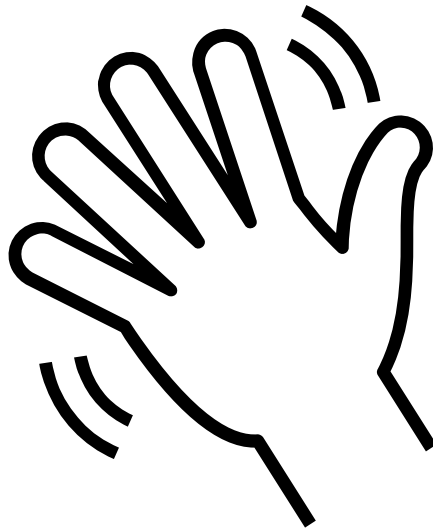
A mixed-methods longitudinal study

From pharmacy student to pharmacist:

exploring the journey of moral

development

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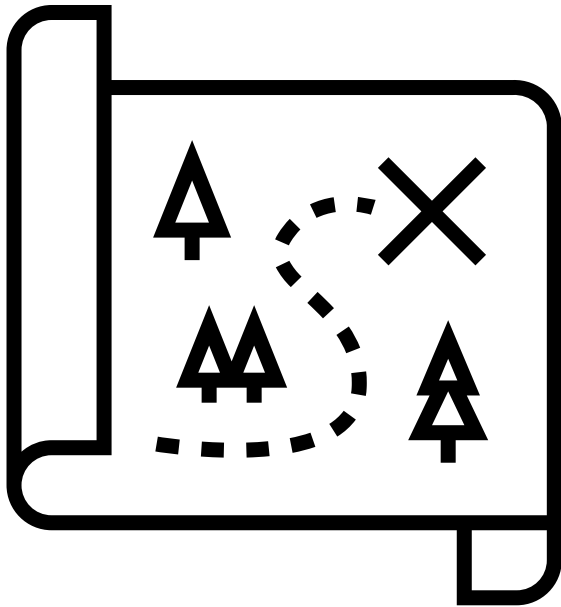
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Overview



Moral Dilemma

Context

Qualitative study

Quantitative study

What's next?



Moral Dilemma

You have an important presentation to give on behalf of your team at work today. It is crucial that you arrive on time as your manager and Senior Leadership Team will be present.

On your way in, you witness an accident near the bus stop where you are queuing for your bus. You and approximately 10 other people witness the incident. Your bus arrives and the majority of the people who saw the incident board the bus ahead of you. What statement describes most closely the action you would take in the moment.

1

Board the bus and hope the people across the road, closer to the accident stop and help, because you cannot risk being disciplined at work.

2

Board the bus. Most people in front of you, who also saw the incident are also getting on the bus, so it is probably okay for you to be on your way too, as you can't let your colleagues down.

3

Acknowledge that not getting this bus will mean that you're going to be late for work and miss the presentation & let your team down, thus risking discipline at work. However, you need to help even though it may be of personal risk to you.

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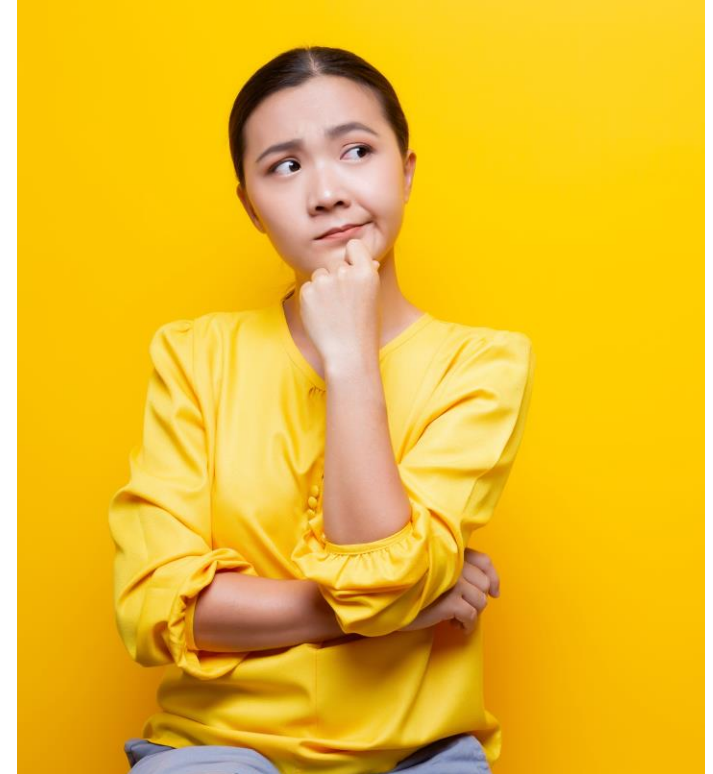
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Morality & Moral Dilemmas

Morality – the ideology behind good or bad and right or wrong in relation to personal behavioural standards and influences in society and culture

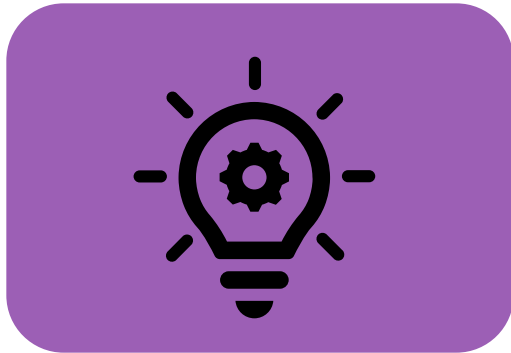
Dilemmas occur where it is not immediately clear what the right action is



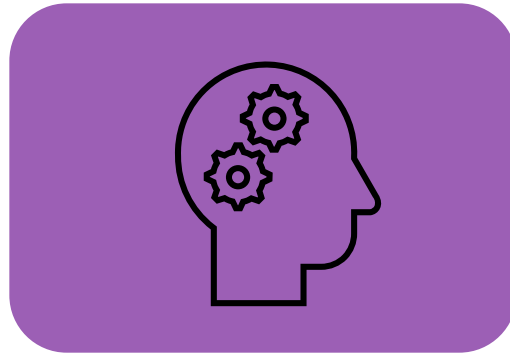
Ethical Principles



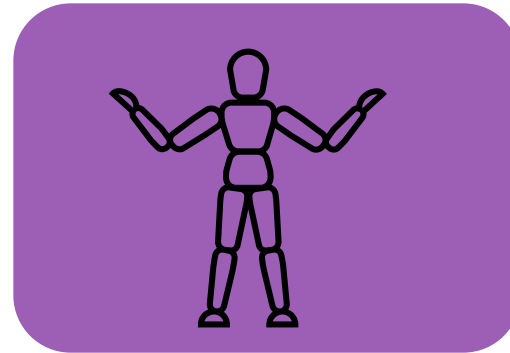
Rest's Four Component Model of Decision Making



Moral
Sensitivity



Moral
Reasoning



Moral
Intention



Moral
Character

Pharmacy – a new dimension

The role of a pharmacist is becoming increasingly complex with more clinical decision making and clinical consultation-based roles ^[1-3]

- Increasing workloads
- Scope changes
- New settings
- Technological advancements

Research shows that healthcare professionals can make better decisions in the interests of their patients, when they have advanced levels of moral decision making.



Moral Education in Higher Education

Higher education experiences can enhance moral development; especially during university, as students are inclined to

“decrease their preference for conventional level reasoning and increase their preference for post-conventional moral reasoning” [4-5]

Formal education makes a unique contribution to moral reasoning [6]

Moral Education at the University of Hertfordshire

- Level 3 module – Law and Ethics
- 30 Credit Module
- Workshops
 - Ethical dilemmas
 - Group discussions

The logo for the University of Hertfordshire, featuring the text "University of Hertfordshire" in a black box and the letters "UH" in a larger, bold, black font to the right.

University of
Hertfordshire **UH**

Pharmacy Education in the UK



Measuring Moral Development

Provides an understanding of the link between moral judgement and moral behaviour.

Qualitative & Quantitative research

- Interviews (Moral Judgement Interview)
- retrospective queries
- Questionnaires (Professional Ethics in Pharmacy (PEP) & **Defining Issues Test (DIT2)**)

DIT2 is used to measure Kohlberg's moral developmental theory in adolescent and adult populations [7].



DIT2 Scoring

DIT is a device for activating moral schemas and for assessing them in terms of importance judgments.

Schemas are sets of expectations, hypotheses and concepts that are formed as the individual notices similarities and recurrences in experience [8].

Schemas operate constantly in the mind, being activated by current stimulus configurations that resemble the stimuli that created the schema in the first instance



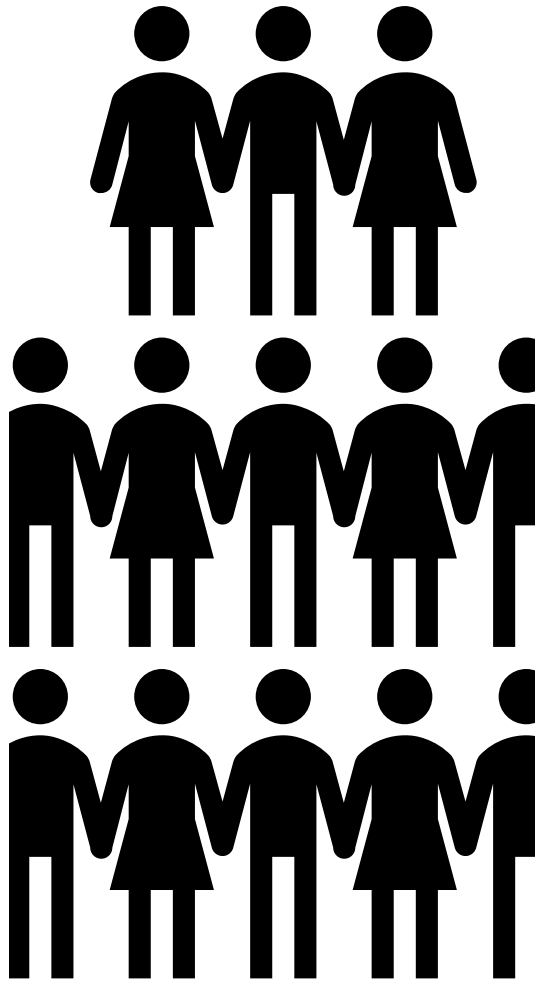
DIT Schemas and Kohlberg's Development Stages

Kohlberg's Development Stages	Defining Issues Test 2 Schemas
Stage 2	Personal Interest Schema (PIS)
Stage 3	
Stage 4	Maintaining Norms Schema (MNS)
Stage 5	Post-conventional Schema (PCS)
Stage 6	

DIT Schemas

Defining Issues Test 2 Schema	Description
Personal Interest Schema (PIS)	Cognitive fields such as survival, personal advantage and impulsive cooperation. <i>“What’s in it for me?”</i>
Maintaining Norms Schema (MNS)	Co-operation generally with those who are not well-known acquaintances. This schema is summarised by the question, <i>“How do my friends and I benefit?”</i>
Post Conventional Schema (P-Score)	Proportion of items selected that appeal to post conventional considerations with a focus on organising society.
N2 Score	Two parts: the degree to which the post conventional statements are prioritised in their responses, plus, the degree to which personal interest items, are rated lower than the ratings given to post conventional items.

Let's revisit the poll results



The Participants

- MPharm students at the University of Hertfordshire
- Convenience sample
- Complete the DIT2 in
 - all four years of the MPharm programme
 - once after completion of the pre-registration year, as a newly qualified pharmacist (NQ)
 - and later as an established practitioner (EP).
- Non-probability sampling design; a population survey of the students who were in attendance on the day the test was administered.
- Participants were assigned unique anonymous identifiers.

Research questions

1. To what extent has moral development been measured in pharmacy students and professionals?
2. What is the relationship between the number of years spent in full-time education and moral decision making?
3. What are the ways that the MPharm programme can be enhanced to emphasise the gains of moral education?
4. What personal and professional experiences have an influence on moral decision making?



Quantitative study

Defining Issues Test 2



Qualitative study

Semi-Structured Interviews

Four Established Practitioner Pharmacists

Statistical Analysis

Shapiro-Wilk is used throughout this study test as our numerical means of assessing normality

Between-group comparisons using non-parametric testing methods

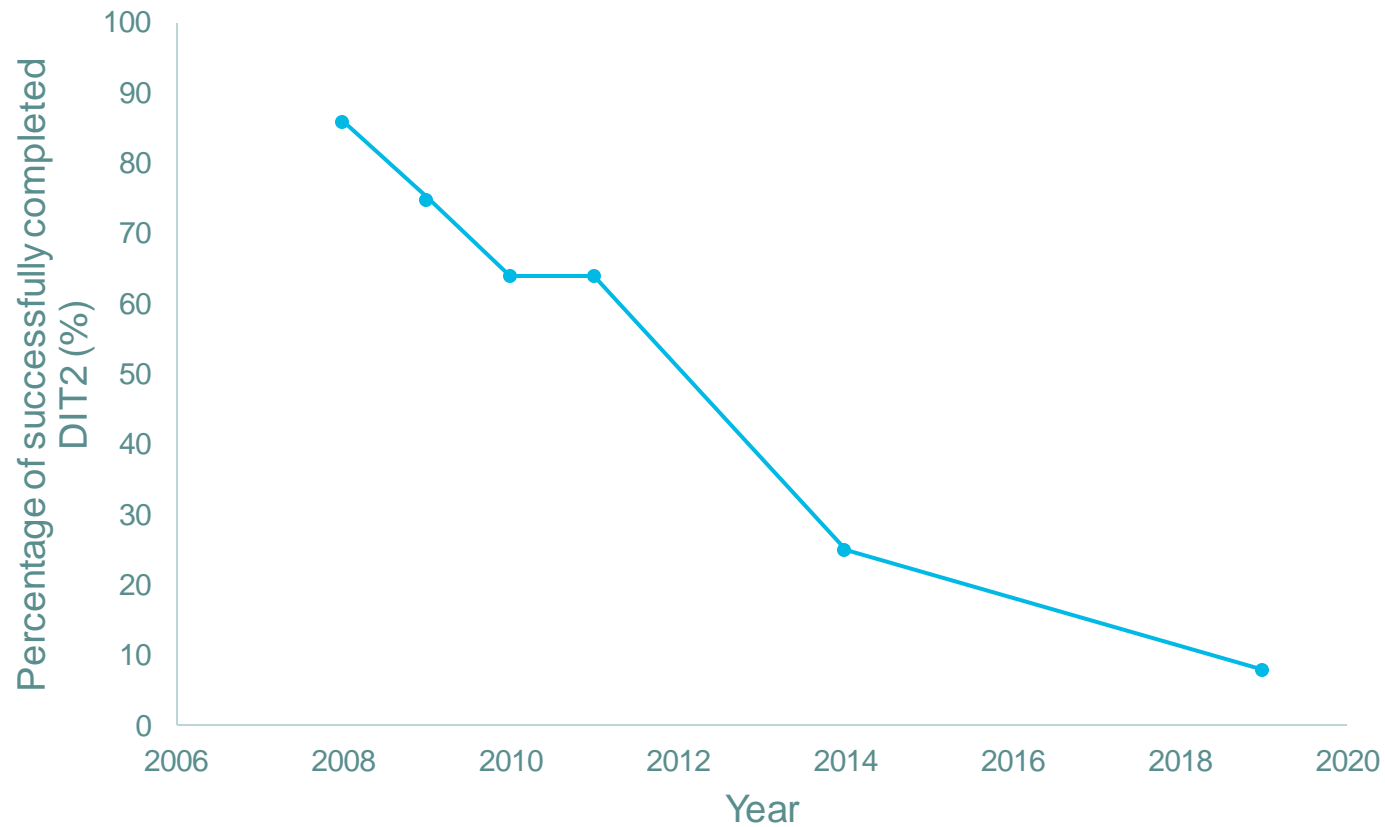
Pairwise comparison with the Wilcoxon signed-rank test

Applying a Bonferroni correction – to avoid throwing away data for missed instances



Results

Percentage survey completion



Percentage survey completion

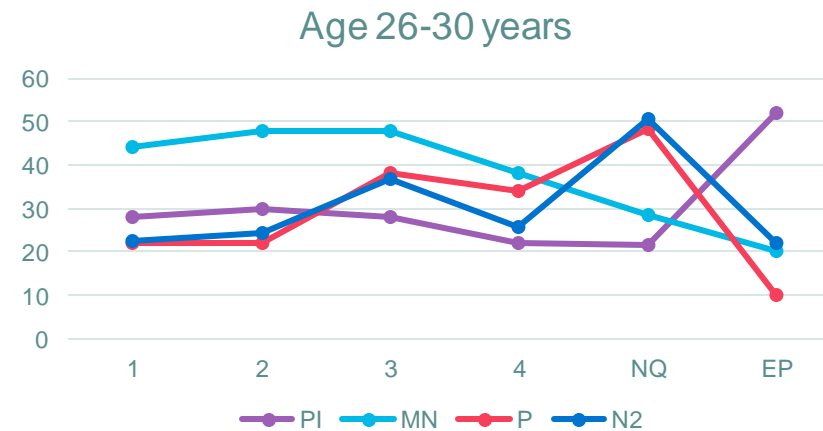
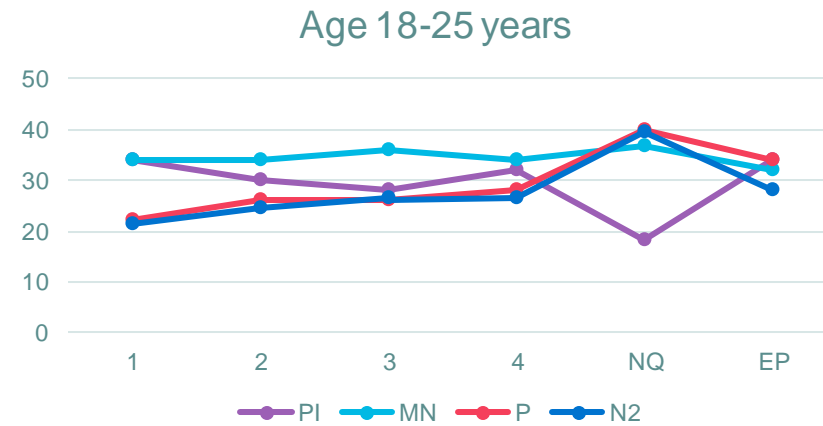
Level	Male		Female		Total
	n	Percentage (%)	n	Percentage (%)	
Level 1	47	38	78	62	125
Level 2	40	36	70	64	110
Level 3	32	34	62	66	94
Level 4	34	37	59	63	93
NQ Level	19	42	24	58	43
EP Level	5	45	6	55	11

Moral Development Indices: Global

- General downward trend with PI
- MN generally steady – transition group
- General upward trend with P and N2
- Marked growth between Level 4 & NQ
- Concerning regression after NQ

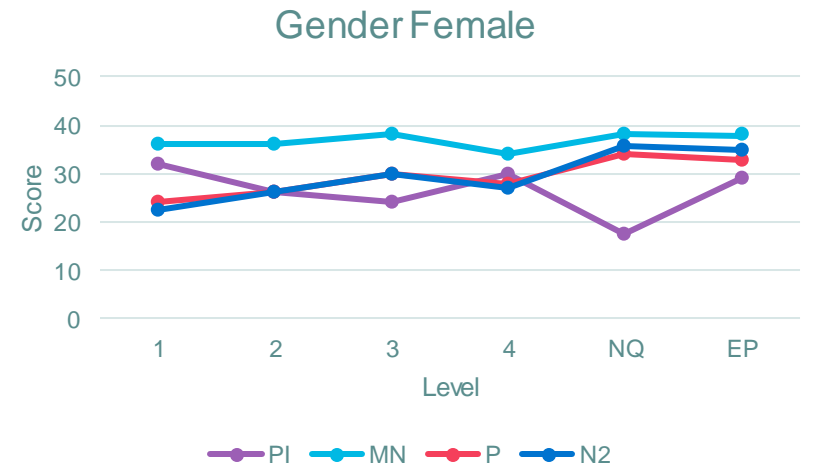
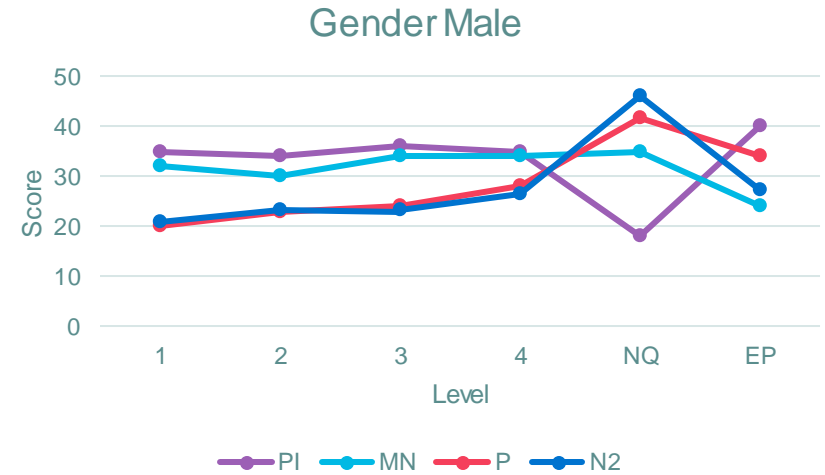


Moral Development Indices: Age



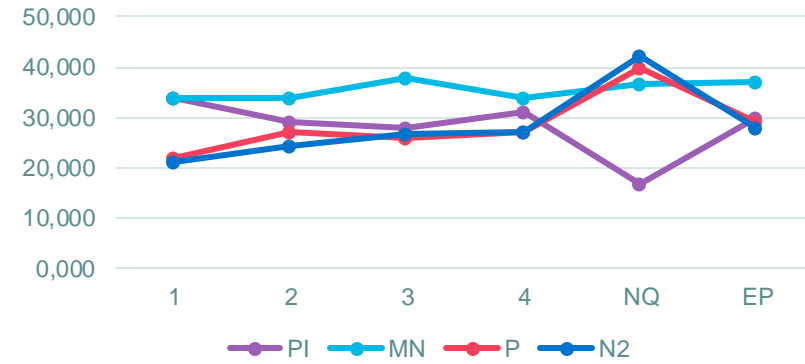
Moral Development Indices: Gender

- Females gradual increase in N2 over study period
- Males showed the same significant changes in N2 between Level 4 & EP

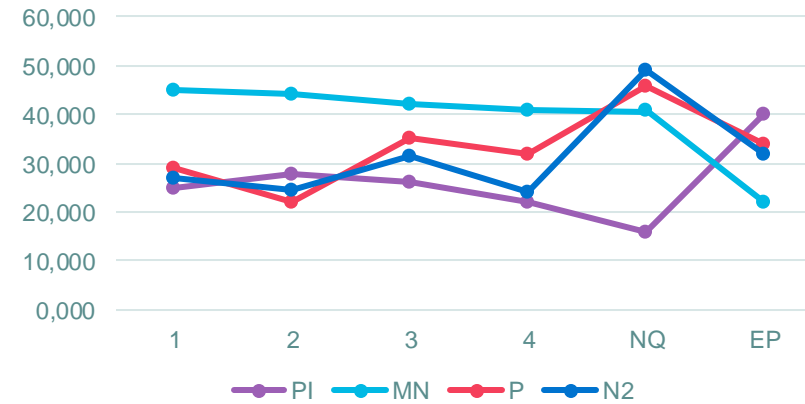


Moral Development Indices: Education

Education - Further education college or equivalent

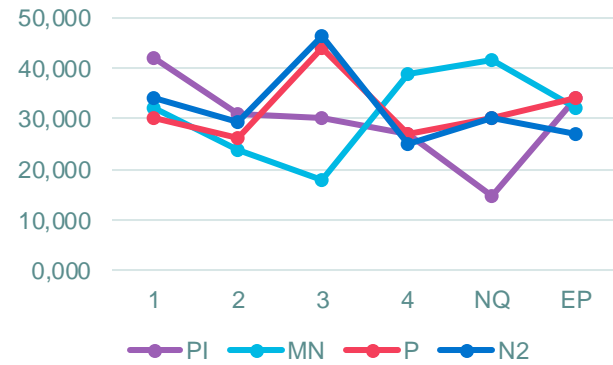


Education - Bachelor's degree

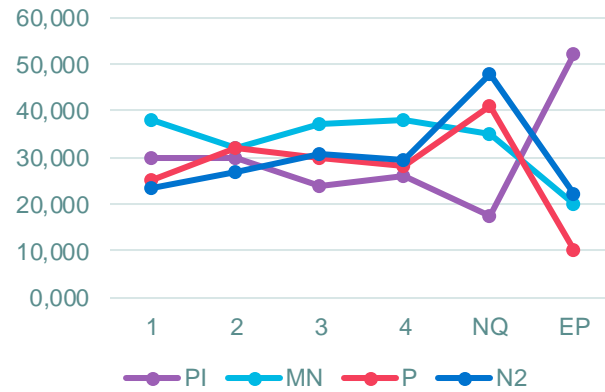


Moral Development Indices: Religion

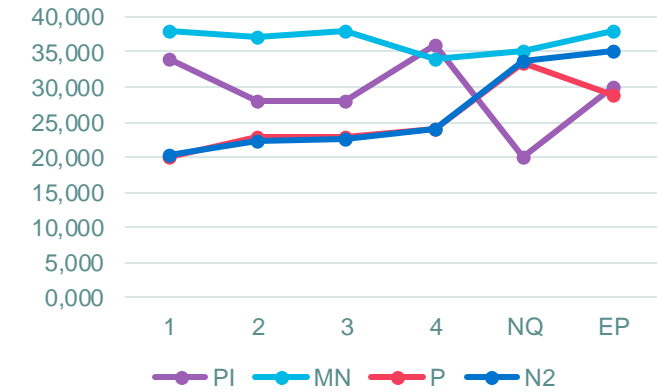
Religion - No Preference



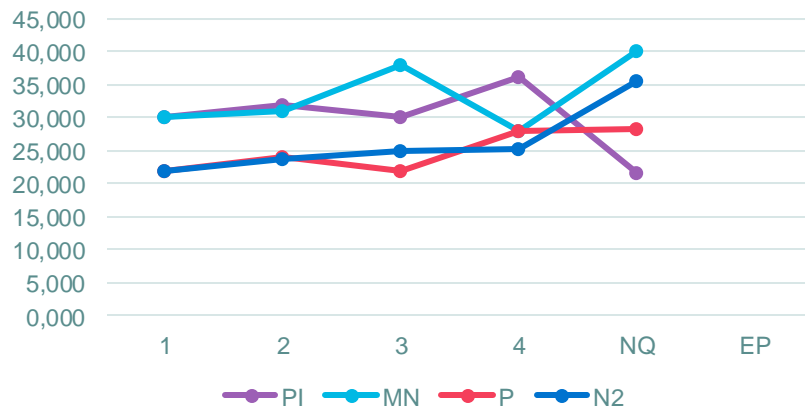
Religion - Christian



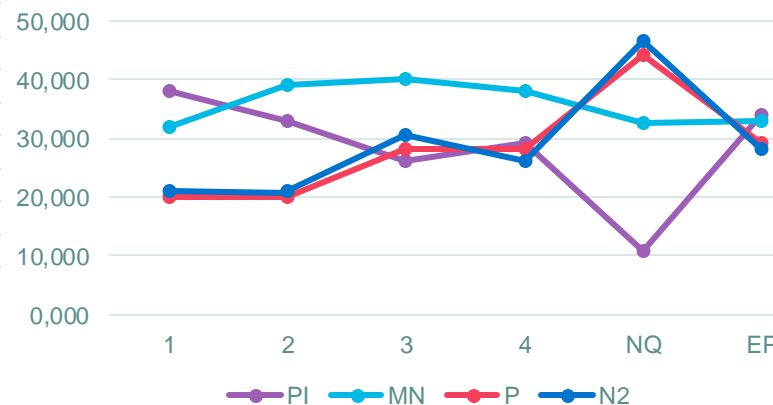
Religion - Muslim



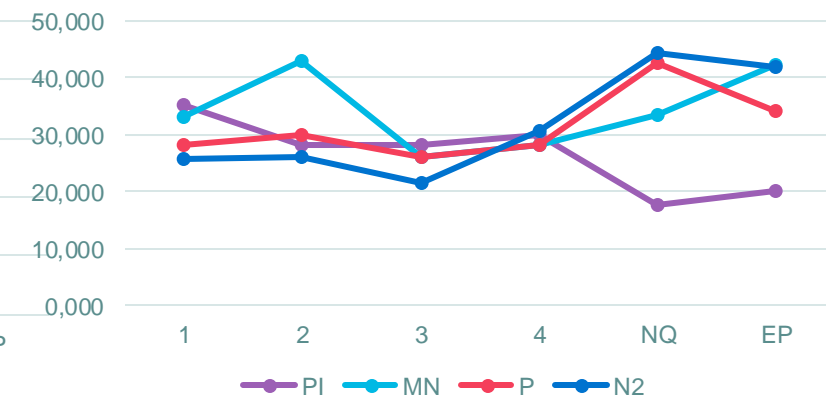
Religion - Hindu



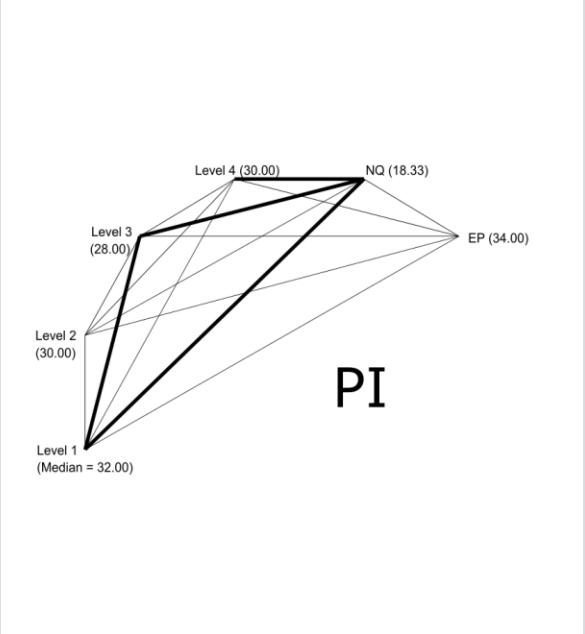
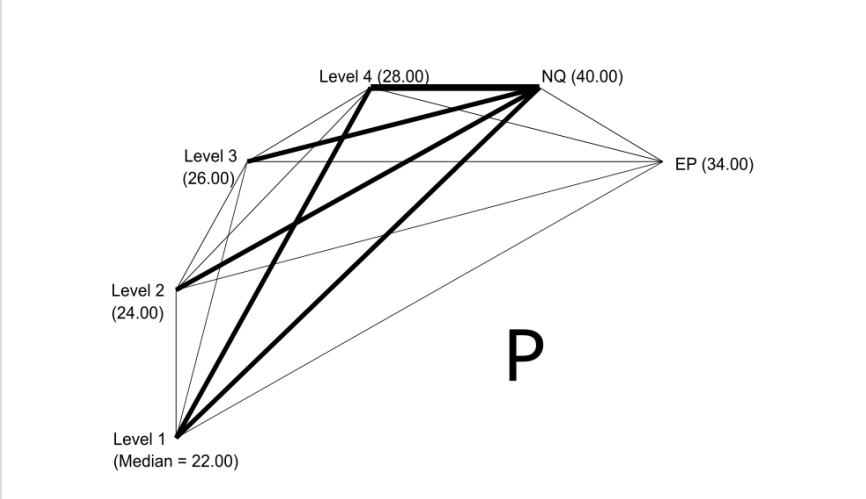
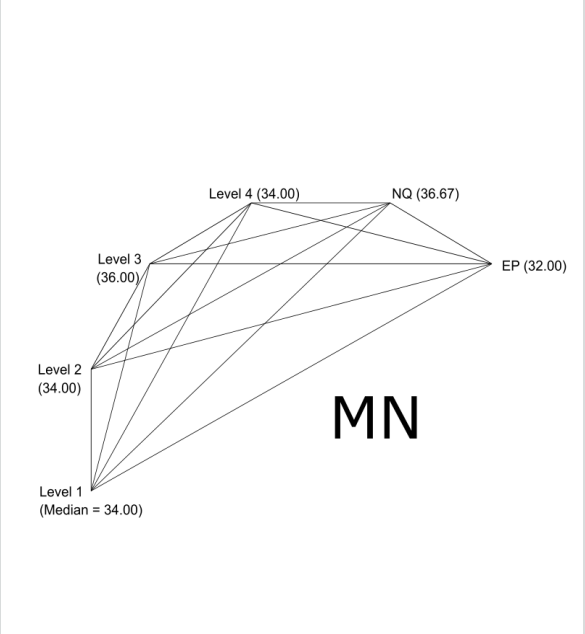
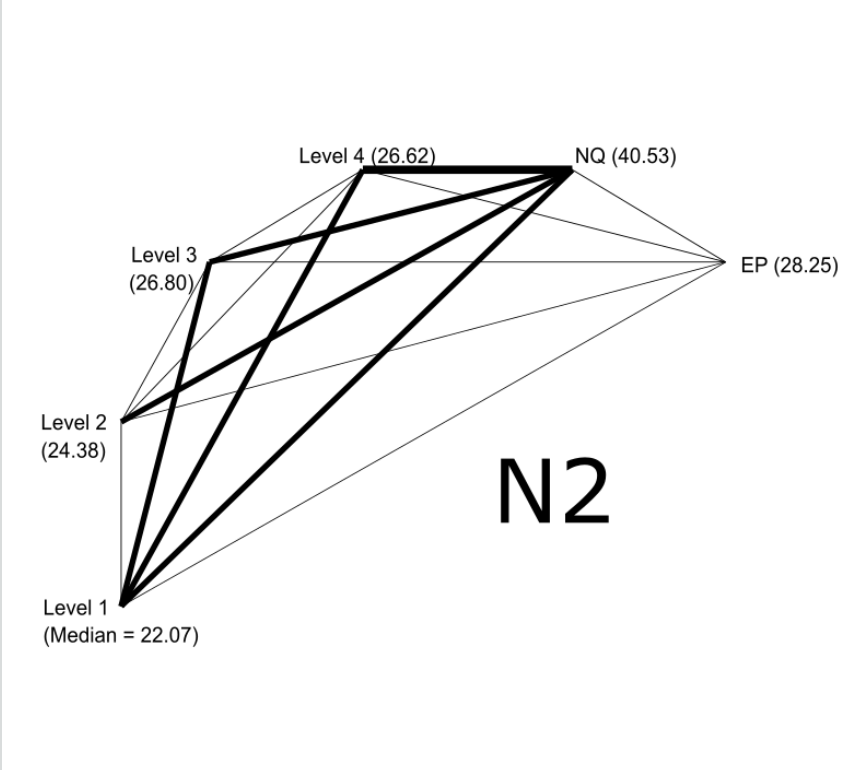
Religion - Sikh



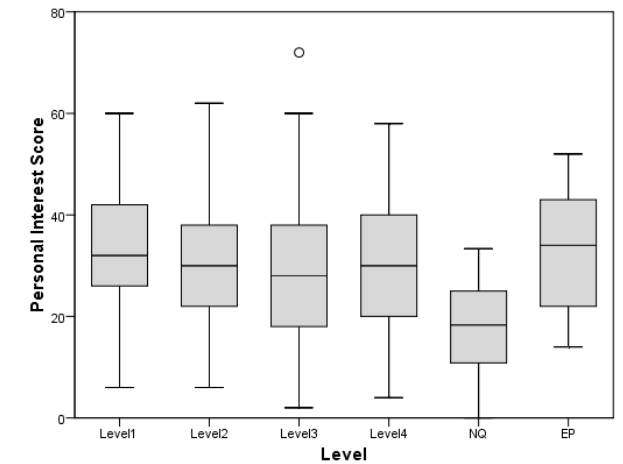
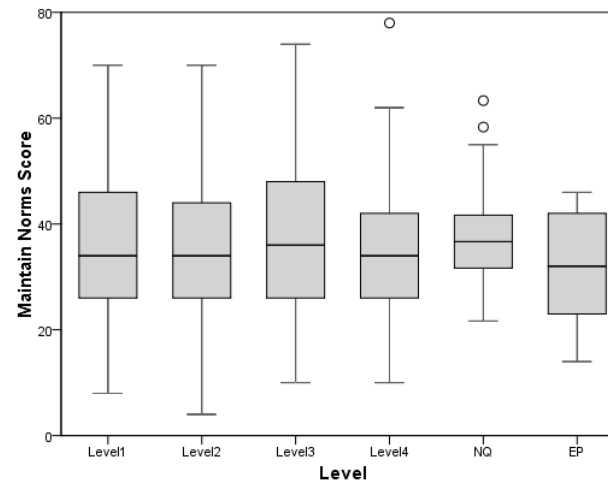
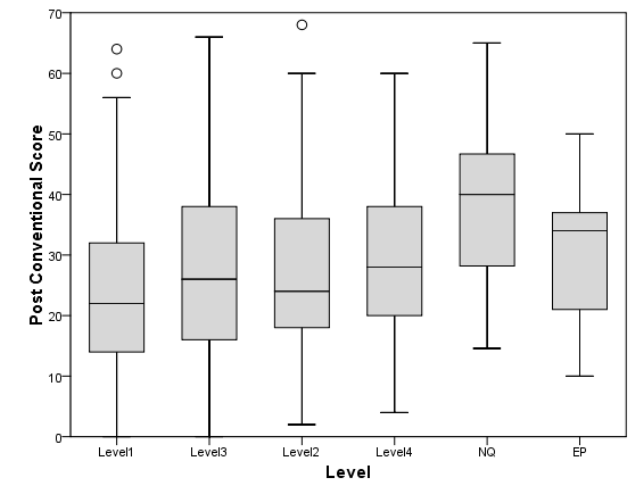
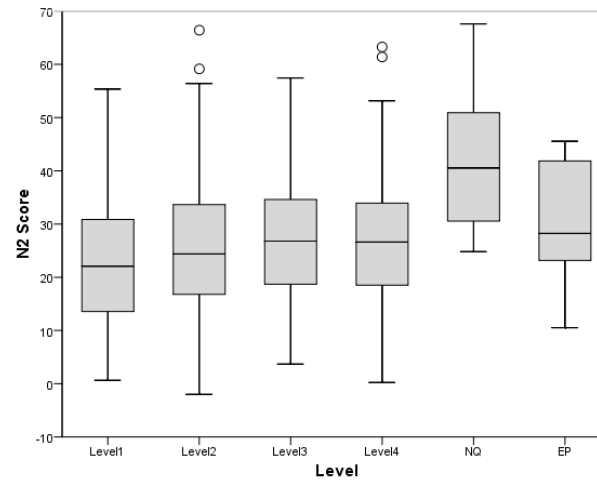
Religion - Prefer not to Say



Global

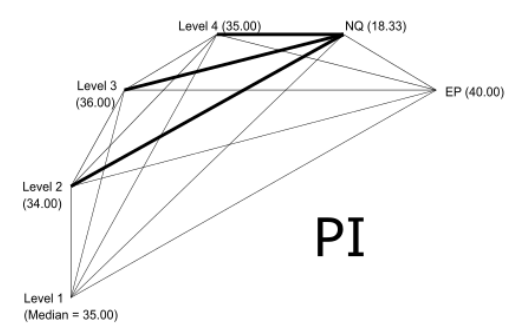
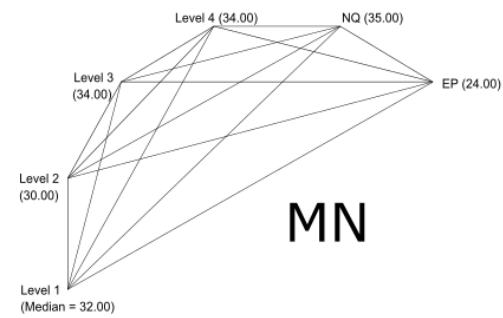
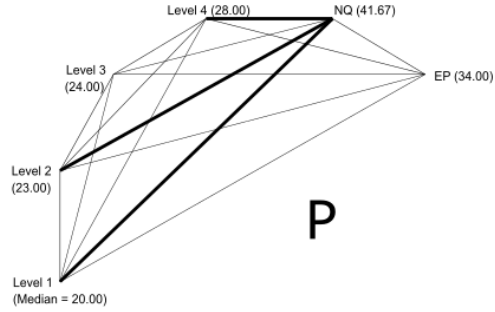
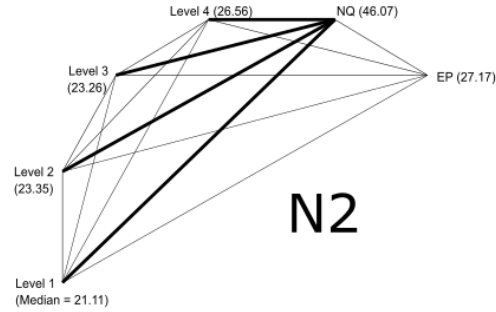


Global Boxplots

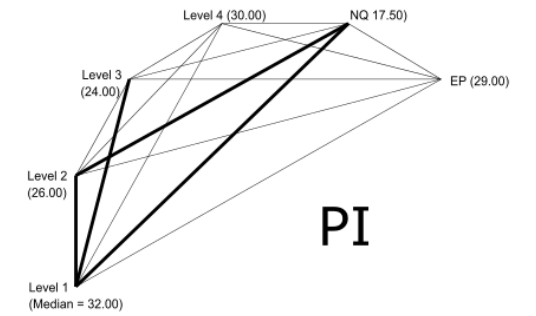
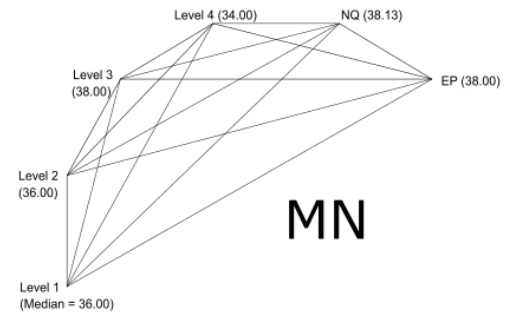
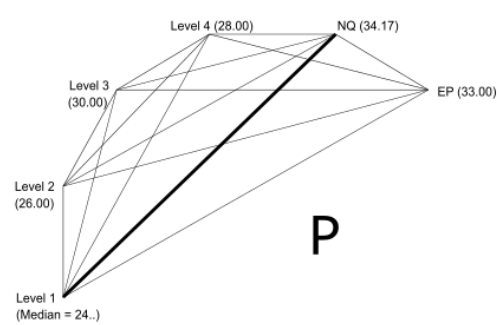
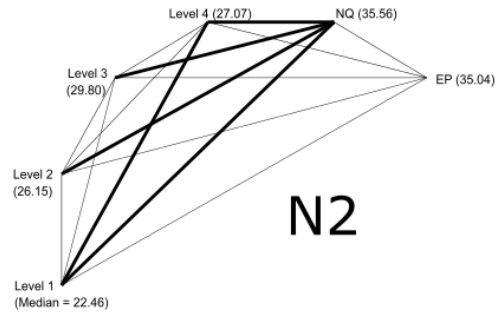


Gender

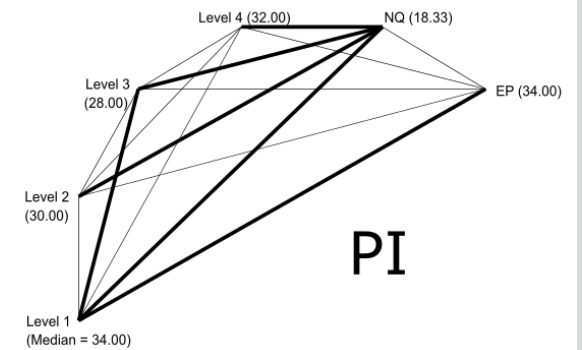
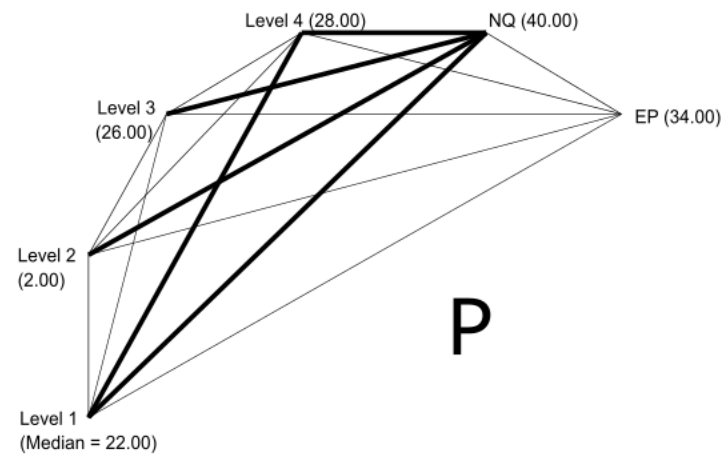
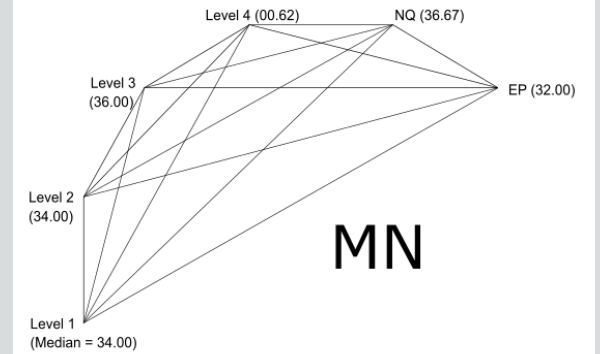
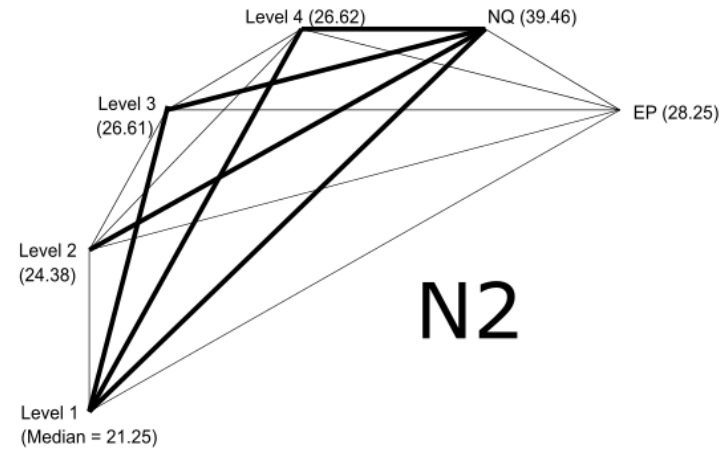
Male



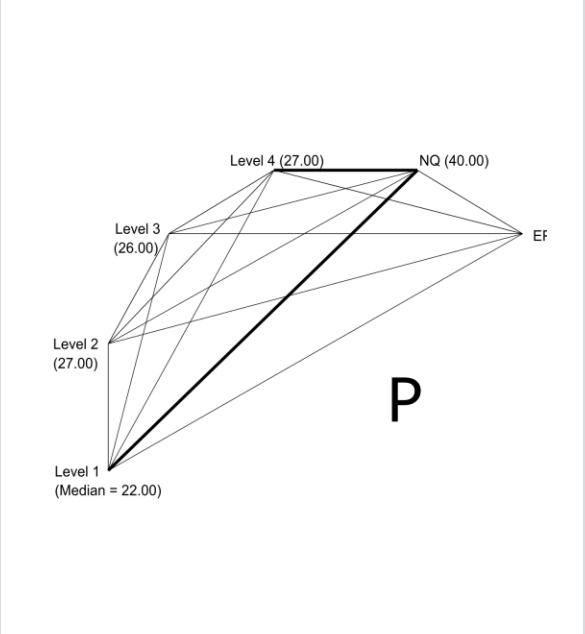
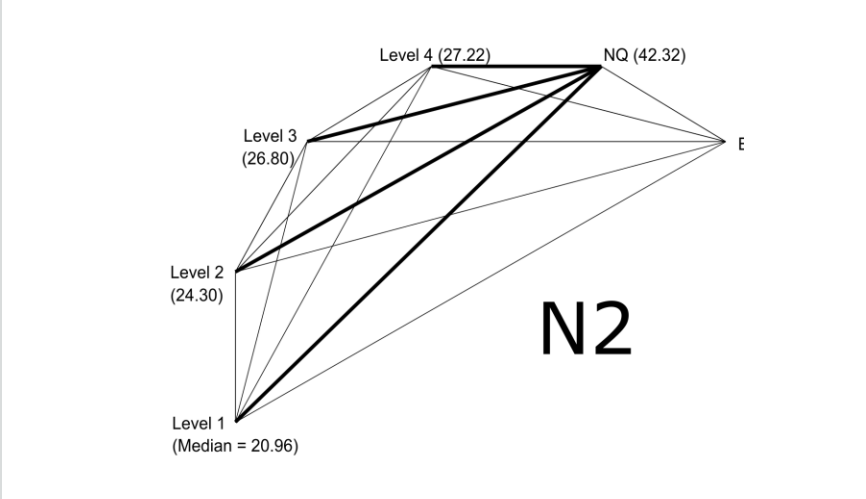
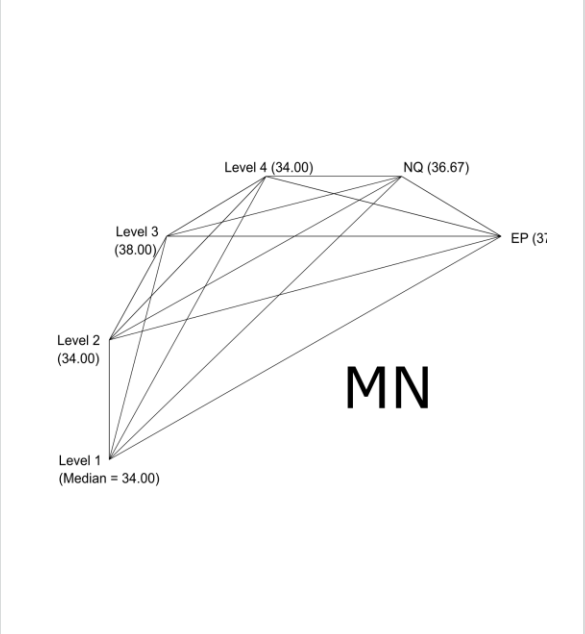
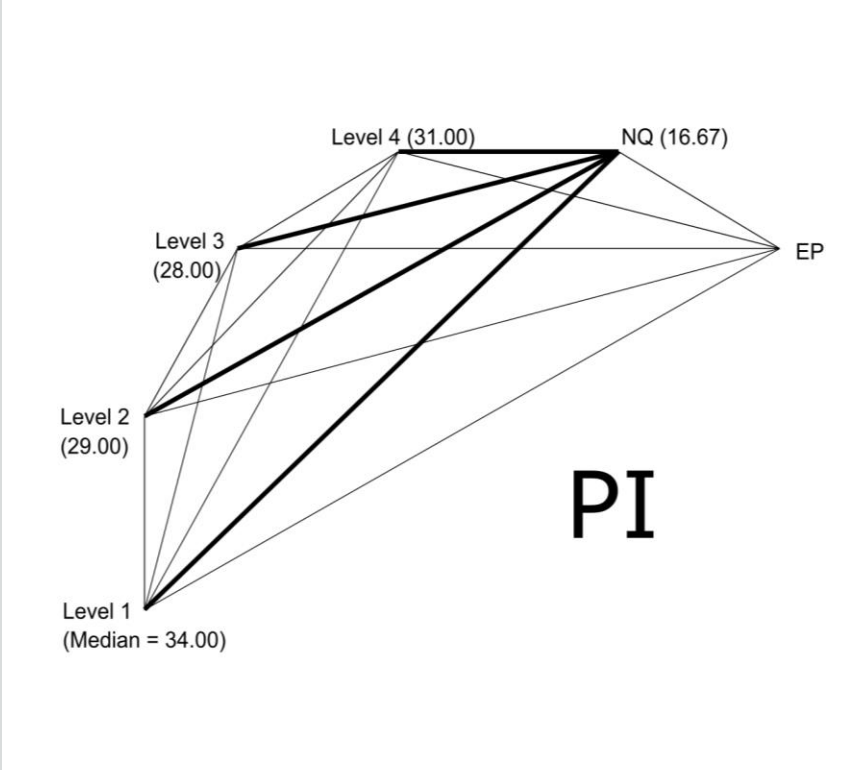
Female



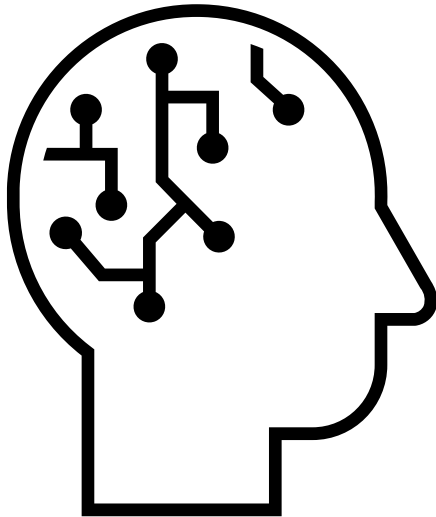
Age (18-25 years)



Education



Quantitative Results Overview



- Participants moved in one step increments towards higher schemas. This mechanism is seen as the participants moved from Level 1 – 4.
- Between Level 4 and NQ, it is more likely that participants then ascended two levels to post-conventional level reasoning.
- Between the NQ and EP Level the opposite seems to be apparent, where many participants regressed to PI.

Quantitative study

Defining Issues Test 2



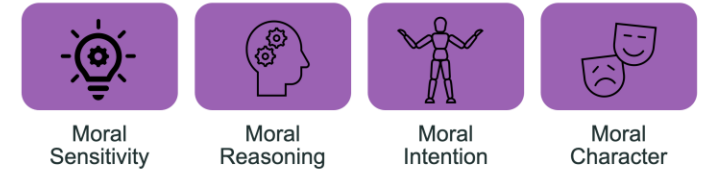
Qualitative study

Semi-Structured Interviews

Four Established Practitioner Pharmacists

Exploring the Journey of Moral Development

Rest's Four Component Model of Decision Making



Semi-Structured Interviews

Phenomenological approach

Interview schedule based on Four Component Model

Sample selection – Participants who nominated themselves at the last DIT2 administration (convenience & snowballing)

Four interviews

Data collection: April/May 2022

Framework Analysis

Interview Participants

Participant	Setting	Gender	Age
EP01	Hosp	Male	31-40
EP02	Hosp	Male	31-40
EP03	Remote Prescribing	Male	31-40
EP04	Primary Care	Male	31-40

KEY THEMES

**PREPARATION
FOR
PROFESSIONAL
PRACTICE**

**MORAL DEVELOPMENT
AND PROFESSIONAL
PRACTICE**

**SUPPORTING
MORAL
DEVELOPMENT IN
PRACTICE**

**TRANSITION TO
PRESCRIBING
PHARMACISTS**

Role of Moral
Education

Pharmacy as
a career

Context in the
profession

Personal
influences

Professional
Influences

Shared
Experiences

Professional
Isolation

Upskilling

Early Career
Prescribing

Preparation for Professional Practice

Role of moral education

- Content not representative of reality
- Single point in the programme

“What I found was that a lot of that stuff we learnt, wasn't used, it was simply, it's simply a case of, I guess it's a tickbox exercise.”EP02

Pharmacy as a career

- Broadening of pharmacy scope
- Perceptions as an undergraduate

“that belt tightening is resulting in people doing a lot more for a lot less.”EP04

“I was surprised, thinking about that way ... is this it? So it was is a bit more of a disappointment cause you you're just thinking, wait. You've had extensive training and medicines...” EP02

Moral Development and Professional Practice

Context in the Profession

- Challenges with work-life balance
- Pharmacists on the frontline
- Increased frequency of dilemmas
- Independent/Autonomous decision making
- Quality of care
- Remuneration

Professional Influences

- Leadership
- Reasoning against others
- Business facing
- Stress
- Patient centricity

Personal influences

- Confidence
- Experience
- Values and beliefs

Supporting Moral Development in Practice

Shared Experiences

- Supporting early career pharmacists
- GPhC role

“Perhaps like a maybe a network or forum where people have posted you know how they've dealt with similar situations and just being aware of what other colleagues are doing.” EP02

Professional isolation

- Peer support

Another thing is pharmacist being on an island. I think what happens in our profession a lot is that we don't have people to lean on. EP04

“I would have acted differently I think, if I had someone close by, in terms of another pharmacist to consult with. That what I helped and it would have made a big difference.” EP03

Transition to Prescribing Pharmacists

*“the **push for pharmacist to become non medical prescribers and independent prescribers**. I think when I first qualified, uh, I heard. I'd heard of supplementary prescribers and they were few and far in between...” EP01*

*“thinking back to when I wrote my first prescription. I don't think. I probably wouldn't have had the emotional or **emotional surety or pharmacy experience** to be able to have done that the day I graduated”. EP02*

*“I think those things play a part when it comes to the ethics of things. Are you to prescribe for someone who, you know. Are you going to make a **sound judgment**? Are you to prescribe for yourself, I think the GPhC frowns upon that, those type of things. So I think those **moral ethical dilemmas play a part when you are practitioner**” EP04*

Challenges & Limitations

Generalisability of the findings

Loss to follow up – GDPR

Sample of interview participants

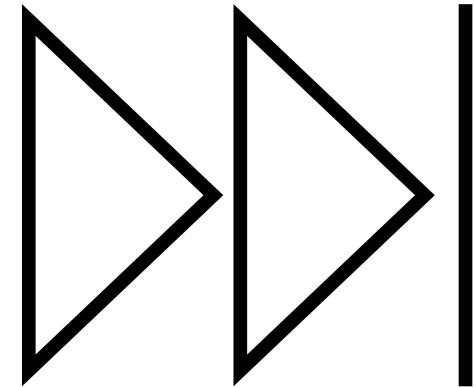
Patient perspective not included in scope

Nuances in ‘generations’ of pharmacists



What's next?

- Further critical analysis of trends
- Implications on teaching of Ethics & Moral Reasoning at UH
- Recommendations in the context of Prescribing
- Considerations for isolation of pharmacists
- Exploration of the need for CPD in MD as Independent Prescribers



Thank you

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