School of Health Sciences
University of Dundee

Resilience and Mental Wellbeing of Pre-registration Students During Covid-19

Education in a Global Pandemic

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Introduction

- There is a link between mental health and resilience and there has been much research about this in healthcare staff prior to the pandemic (Kinman et al 2020)
- Emotional resilience is seen to safeguard against negative psychological impact of stressors and is important in adapting to stressful environments (Turner, 2014)
- Factors to influence resilience of nurses include professional identity, social support, control and motivation to address challenges (Yilmaz, 2017)
- Activities to increase student resilience include reflection, problem based learning and peer learning (Walsh et al, 2020)
- The COVID-19 pandemic has exacerbated rates of psychological distress and psychiatric illness in health care workers (Muller et al 2020; Twinch 2020), including student nurses (Casafont et al 2021, Thornton et al 2021)

Background

- COVID-19 in March 2020 had a significant effect on front line care delivery
- As well as the patients being admitted to hospital, frontline staff were becoming ill and needing to isolate
- Supernumerary clinical placements were suspended for healthcare programmes in the UK
- There was a four nation approach giving healthcare students the opportunity to support the frontline workforce in direct patient care delivery
- The role for nursing students was paid, and a hybrid between student and healthcare support worker
- There was a specific role description, and national guidance and support throughout this period which was between May and the end of August 2020
- In the School of Health Sciences at the University of Dundee, most final year nursing students participated, completing their programme on this extended clinical placement
- Approximately half of the nursing students in year two also went into extended placement, with the other half opting to continue learning from home during this period

Background

- We were concerned about the impact of this 18 week extended placement during the 1st UK lockdown on the wellbeing of students, both those who participated and those who for a range of reasons could not participate and continued to study online.
- We were also concerned about the ongoing impact on students resilience and mental wellbeing as students returned to study online during the autumn semester 2021 due the continuing restrictions preventing the return of students to campus.

Research Questions

1. How resilient and mentally healthy are pre-registration students following eighteen weeks of paid employment in clinical practice or online study during the first national UK lockdown(March – August 2020?
2. Are resilience and mental wellbeing being maintained over time as students continue to study online during the autumn semester (September – December 2020)?
3. Is there a correlation between students' reported mental wellbeing and resilience?
4. Are there differences in resilience and mental wellbeing according to gender, campus, field of nursing or age of students?
5. What interventions or support mechanisms do students feel could help maintain their resilience and mental wellbeing?

Study Design – Mixed Methods

- Online survey
  - Resilience measured using 10 item Connor-Davidson Resilience Scale (CDRS-10)
  - Mental wellbeing measured using Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) - 14 items
  - Demographic questions – gender, field of nursing, age and campus base
- Survey administered twice
  - Start of semester 1(Sept/Oct 2020) – following 18 week period of paid placement or online study
  - At end of semester 1 (Dec 2020/Jan 2021)
  - ANOVA, maximal modelling and regression analysis using RStudio
- Participants – all 2nd year students (2018 entrants) n=370 invited to participate
- 3 Focus groups one each with adult (n=4), child (n=4) and mental health (n=7) nursing students
  - Thematically analysed (Braun & Clark 2006) independently by Jon & Julie ,comparison and agreement of themes, returned to participants for member checking
- Ethical approval via University Ethics Committee

Demographic characteristics and responses to survey 1 and 2

Demographic Characteristic	Survey 1	Survey 2
Male	5	4
Female	106	10
Other	0	1
Campus 1	21	22
Campus 2	90	89
Adult Nursing	81	79
Child Nursing	22	11
Mental Health Nursing	8	21
<20	10	3
20 - 25	53	59
26 – 30	12	12
31 – 35	14	11
36 - 40	10	15
41 – 45	7	3
46 - 50	5	6
>50	0	1
Prefer not to say	0	1

Q.1 How resilient and mentally healthy are pre-registration students following eighteen weeks of paid employment in clinical practice or online study?

Q.2 Are resilience and mental wellbeing being maintained over time?

Resilience and Mental Wellbeing Results of First Survey

Scale	Sample size	Range of Scores	Mean	Standard Deviation
Resilience	111	6 – 38 (max. 40)	26.23	6.98
Mental Wellbeing	111	20 – 69 (max. 70)	44.41	10.76

Resilience and Mental Wellbeing Results of Second Survey

Scale	Sample size	Range of Scores	Mean	Standard Deviation
Resilience	111	12 – 38	26.48	6.18
Mental Wellbeing	111	15 - 63	42.73	10.91

- Mean resilience score of 26.23 and mental wellbeing score of 44.41 slightly lower than studies of similar populations of university and nursing students pre-covid 19 (Cilar et al 2019; Avrec Bar et al 2018; Lekan et al 2018; Rios-Risquez et al 2018; Aloba et al 2016; Chamberlain et al 2016; Dong et al 2016)

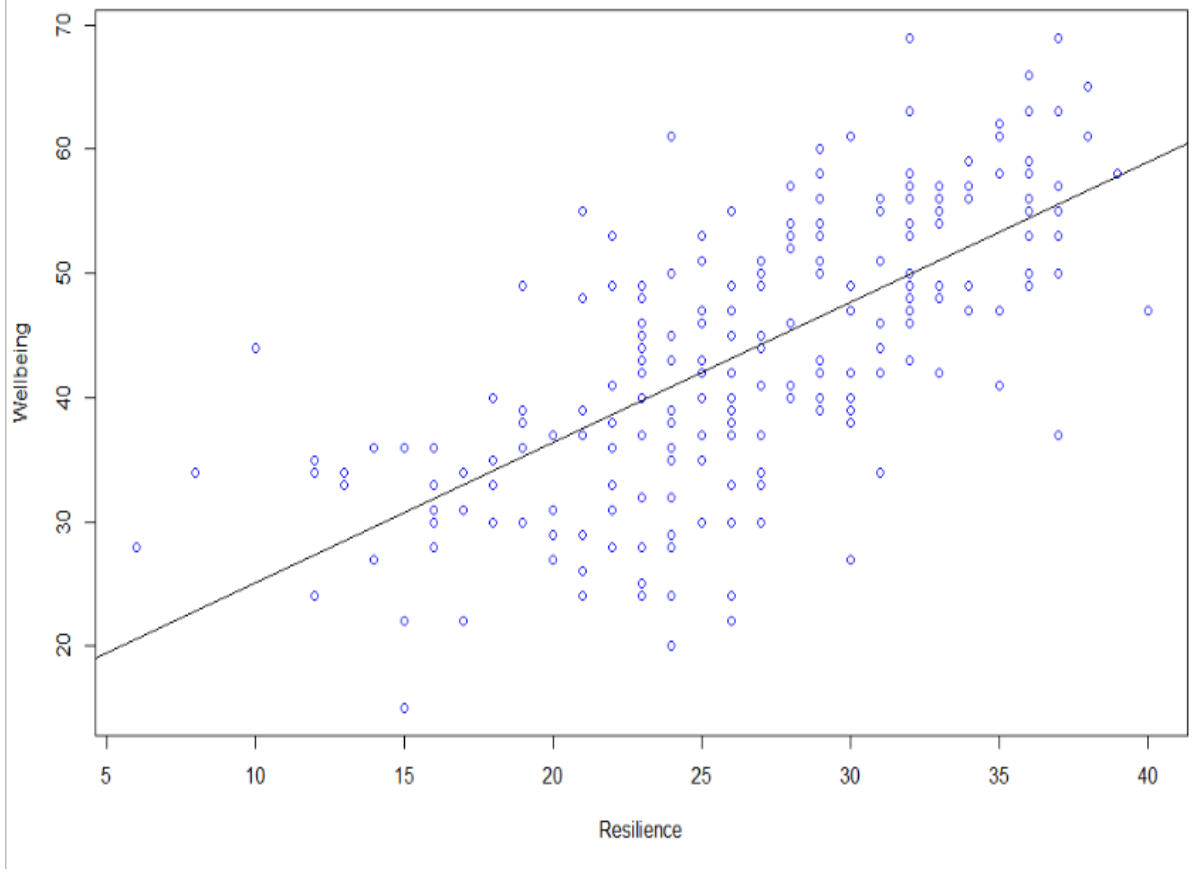
- ANOVA demonstrates no significant difference in resilience scores (*F=0.089; p=0.766*)or mental wellbeing scores (*F=0.43; p= 0.513*) when comparing all responses to 1st and 2nd surveys.
- However ….

Q.2 Are resilience and mental wellbeing being maintained over time?

Scale	Sample Size	Range	Mean	Standard Deviation
Resilience 1	37	8 - 37	26.51	6.76
Resilience 2	37	12 - 36	24.38	6.62
Mental Wellbeing 1	37	25 - 69	44.97	10.19
Mental Wellbeing 2	37	15 - 58	40.05	9.17

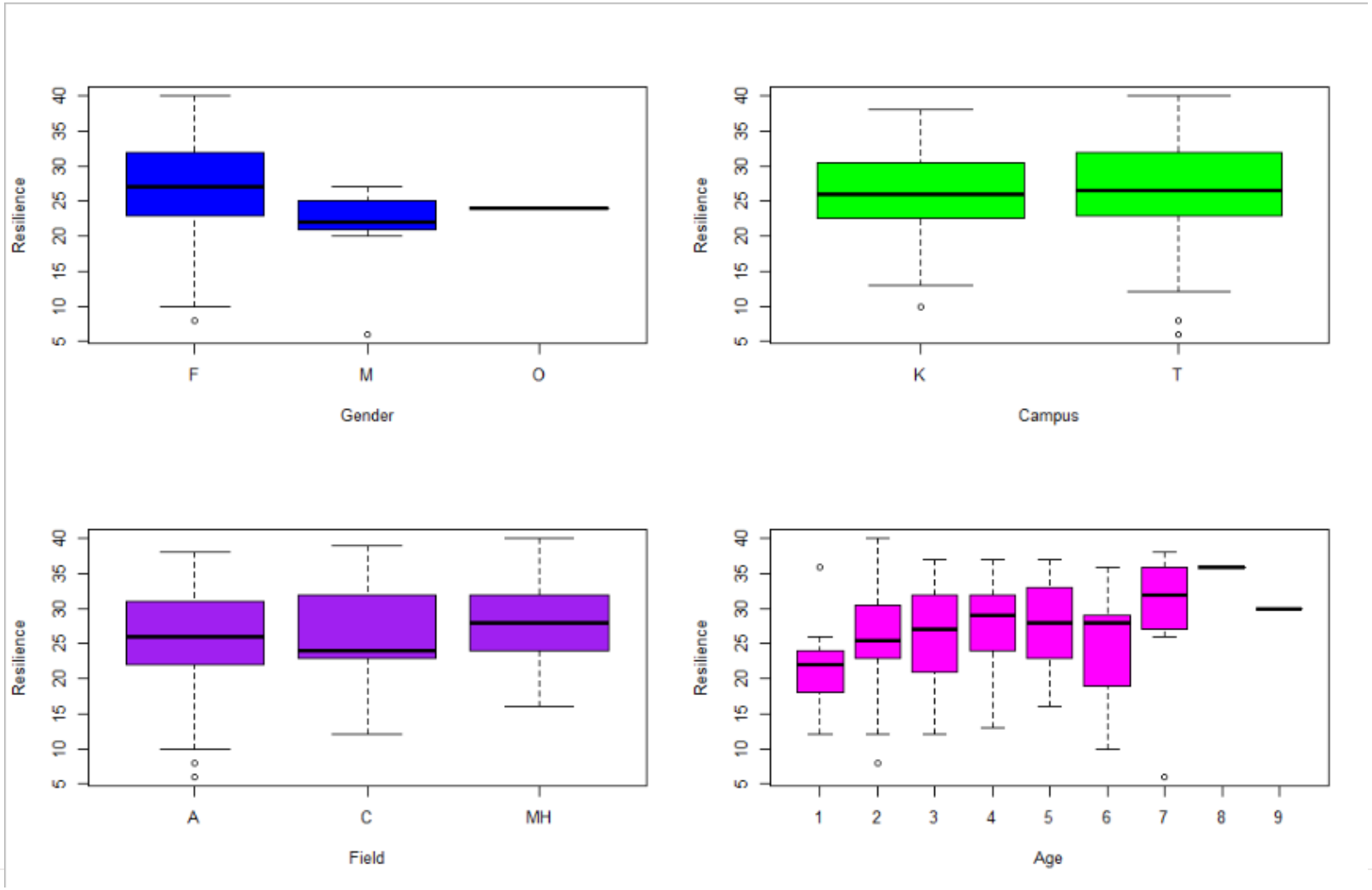
- A different picture emerges when comparing matched pairs of surveys, i.e. those students who answered survey 1 and 2 *(n=37)*
- ANOVA demonstrates a highly significant decline in both mental wellbeing *(F=19.643; p=0.0001)* and resilience *(F=9.168; p=0.005)* of students completing both surveys.

Q.3 Is there a correlation between students' reported mental wellbeing and resilience?



Linear modelling demonstrates a positive correlation *(slope = 1.12; intercept = 13.84; r = 0.684; p> 0.001; R Squared = 46.6)*

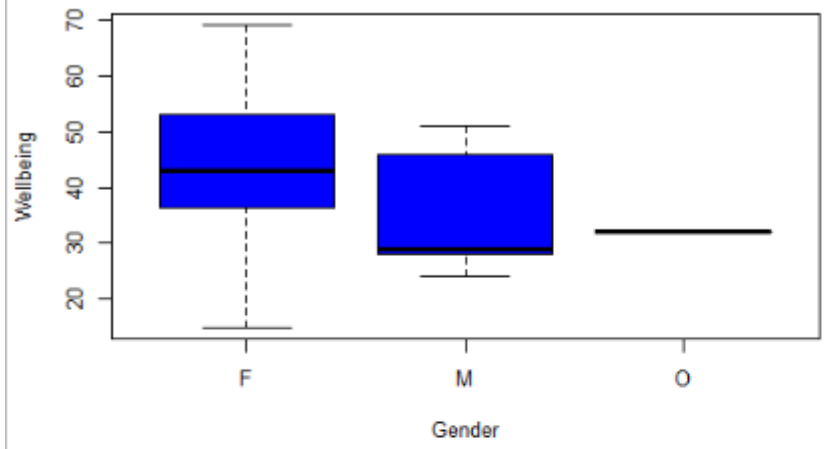
Q.4 Are there differences in resilience according to gender, campus, field of nursing or age of students?

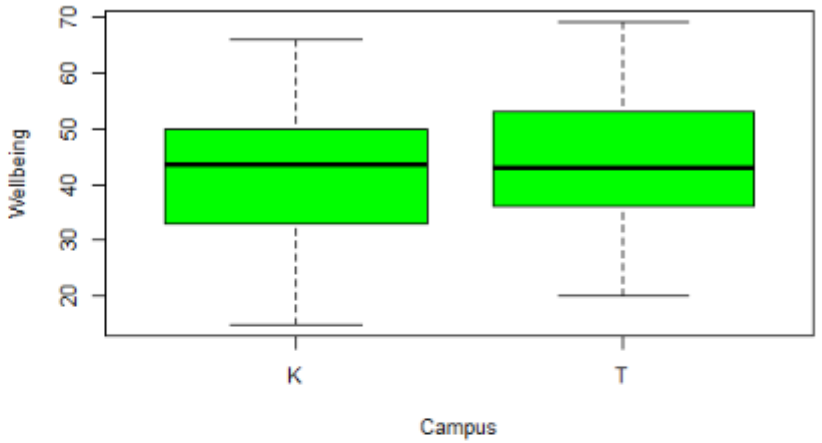


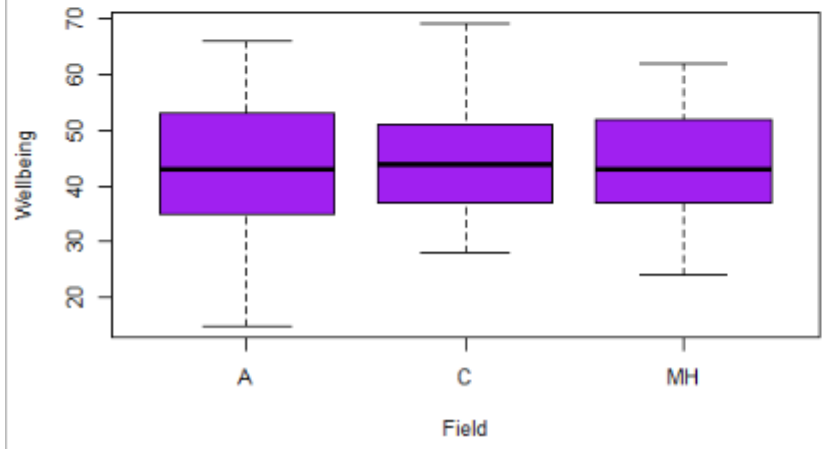
Gender: F = Female; M = Male; O = Other.
Campus: K = Kirkcaldy; T = Tayside
Field: A = Adult; C = Child; MH = Mental Health
Age: 1 =<20; 2=21-25;3=26-30;4=31-35;5=36-40;6=41-45;7=46-50;8>50;9=prefer not to say

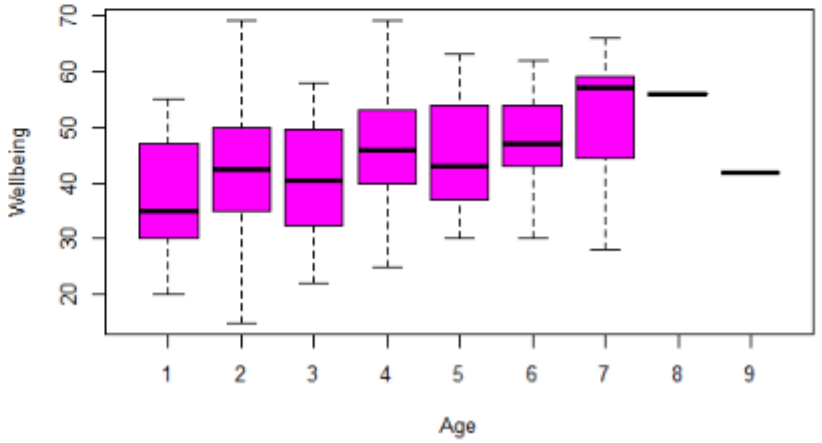
Maximal modelling and stepwise regression demonstrates a significant effect of gender with males reporting less resilience than females *(F=3.11; p = 0.046)*

Q.4 Are there differences in mental wellbeing according to gender, campus, field of nursing or age of students?









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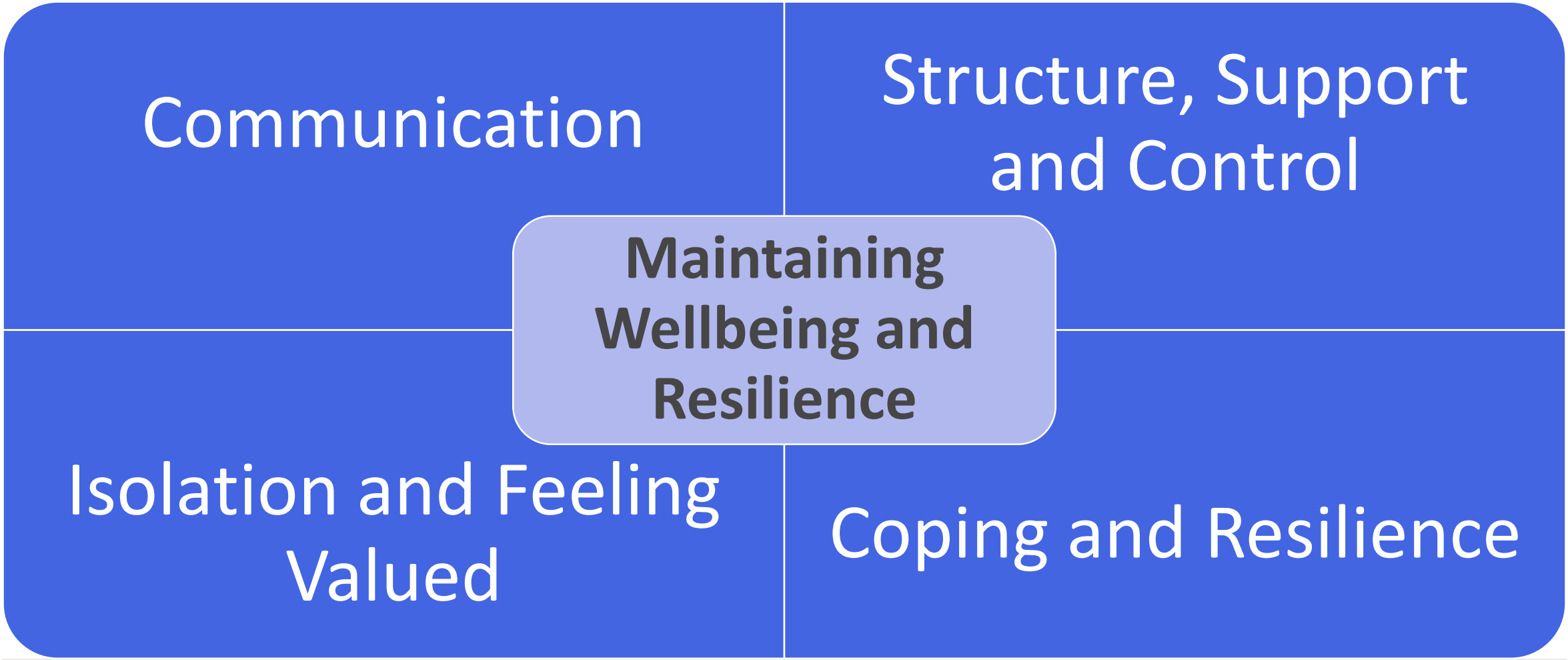
Maximal modelling and regression again indicates a significant effect of gender *(F = 3.087; p =0.047)* with males reporting lower mental wellbeing.

There is also a significant difference (*F-2.527; p = 0.012)* between group 1 (students aged <20) and group 7 (students aged 47 – 50). Older students report significantly higher levels of mental wellbeing

Q.5 What interventions or support mechanisms do students feel could help maintain their resilience and mental wellbeing?



Q.5 What interventions or support mechanisms do students feel could help maintain their resilience and mental wellbeing?

Key Theme – Communication

It impacted on engagement, feelings of isolation, being valued and was a significant contributor to anger and frustration when perceived as being done badly.

Conversely, when managed well, it was an important coping mechanism

The lack of communication at times made students feel the university was not there for them, “broadcast” emails without specific targets reduced student’s engagement with information

“…and I didn't feel like anybody listened to me or to any of the classmates… I was just like, I reached a brick wall and thought I can't do this anymore.”

“…. It can be incredibly overwhelming and it will make you dig even further into that hole and avoid the world…”

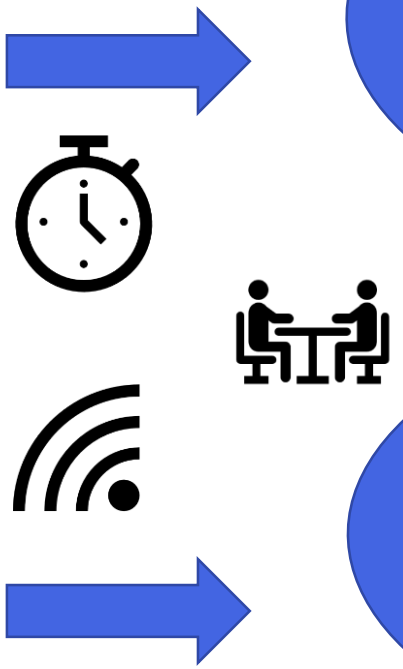
Q.5 What interventions or support mechanisms do students feel could help maintain their resilience and mental wellbeing?

Structure, Support and Control

In general, they wanted more structure to their online learning, with clear signposting of timeframes and tasks to be completed each week. They felt a more structured approach would increase their motivation:

Practical considerations such as equipment and the environment students were studying in also affected their learning

They could not understand why face to face sessions could not simply be relocated online.



"If there was more of a timeline to go by, I would probably get up and get ready and… you know, if I had to be up for a class then I would be up and ready…"

"See the thing I never understood, if we were attending uni., we would be in a (tutorial) meeting every single week. That's not happening."

Q.5 What interventions or support mechanisms do students feel could help maintain their resilience and mental wellbeing?

Coping and Resilience

Students reflected on how they had managed various aspects of their lives over this period. Some participants relished the uncertainty of the situation, others felt overwhelmed

Students who were struggling identified where they sought support, for example counselling services. They also talked about how they had found their own ways of dealing with the situation, such as turning off electronic devices, exercising and getting outside.

"The thing is, you do always get something from it and I was just really excited to see what happened."

"I don't know, you just need to get on with it. You have to adopt a mentality and just plod on with that"

Key Findings

- Overall resilience and mental wellbeing appear to be stable in the sample studied
- However, significant decrease in both measures in matched pairs
- Male students more vulnerable, contradicting previous research (Kisely et al 2020, Muller et al 2020, Nartova-Bochaver et al 2021)
- Younger students more vulnerable, also contradicting previous research (Rios-Risque et al 2018), possibly due to younger students being unable to socialise and interact (Bu et al 2020)
- Students feel isolated and lonely
- Need for more structure and support
- Need for effective communication
- Requests for more peer interaction and support

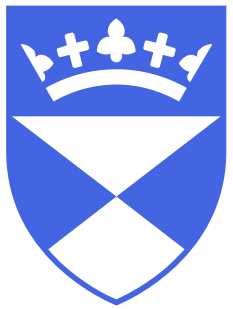
Limitations

- Small scale study
  - Only 1 cohort of students at 1 university
  - Only 30% response rate to each survey
  - Only 10% response rate to both surveys
  - Only small sample of male students
- Cannot generalise beyond the sample studied, but provides preliminary data for further investigation

Next Steps

- Repeat quantitative stage with 1st year pre-registration nursing cohort prior to and following first clinical placement during ongoing pandemic

- Pilot of action learning sets with 2nd year pre-registration nursing cohort in response to their requests for more peer support to investigate whether this type of intervention can increase students' mental wellbeing and resilience.



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Questions?