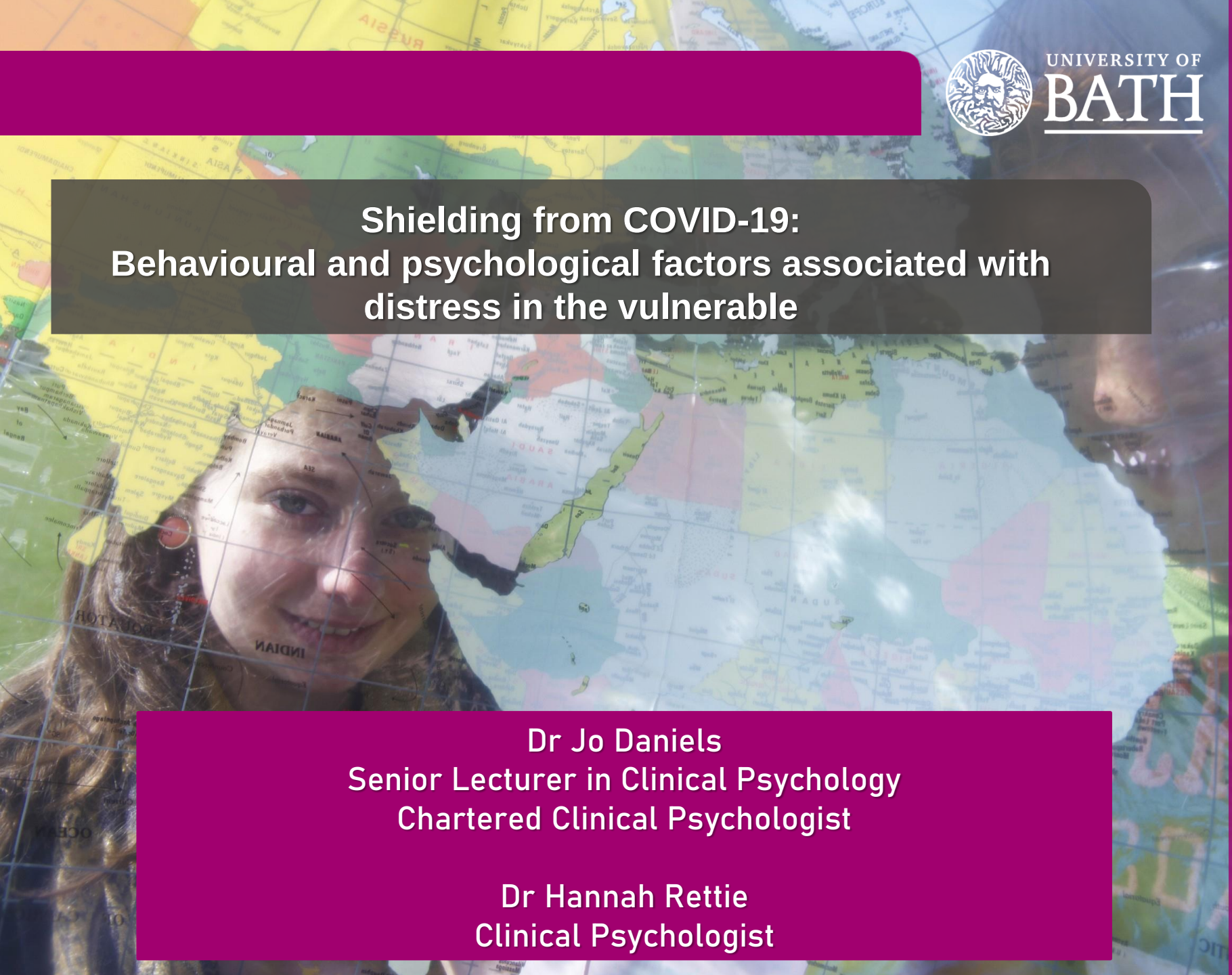

Shielding from COVID-19: Behavioural and psychological factors associated with distress in the vulnerable

Dr Jo Daniels
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Shielding from COVID-19

- 2 million people shielding
- Realistic threat
- 91% underlying medical condition

Complex factors:

- Neglected in government briefings
- Clinic delays and cancellations
- Social isolation and stigma
- Higher rates of mental health difficulties

Brooks et al. (2020)

Psychological risk factors = high

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AMERICAN PSYCHOLOGICAL ASSOCIATION

American Psychologist

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Coping and Tolerance of Uncertainty: Predictors and Mediators of Mental Health During the COVID-19 Pandemic

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The current pandemic wave of COVID-19 has resulted in significant uncertainty for the general public. Mental health and examining factors that may influence distress have been outlined as key research priorities to inform interventions. This research sought to examine whether intolerance of uncertainty and coping responses influence the degree of distress experienced by the U.K. general public during the COVID-19 pandemic. Using a cross-sectional online questionnaire design, participants were recruited ($N = 842$) using snowball sampling over a 10-day period in the early "lockdown" phase of the pandemic. Around a quarter of participants demonstrated significantly elevated anxiety and depression, with 14.8% reaching clinical cutoff for health anxiety. A one-way multivariate analysis of variance indicated those in "vulnerable" groups were significantly more anxious ($p < .001$), and also more anxious in relation to their health ($p < .001$). Mediation modeling demonstrated maladaptive coping responses partially mediated the predictive relationship between intolerance of uncertainty and psychological distress. Mental health difficulties have become significantly raised during the first wave of the COVID-19 pandemic in the United Kingdom, particularly for the vulnerable. Findings support emerging research suggesting the general public is struggling with uncertainty, more so than normal. Vulnerable groups are more anxious about their health, but not more intolerant of uncertainty than the nonvulnerable. Finally, this study indicated two modifiable factors that could act as treatment targets when adapting interventions for mental health during the COVID-19 global health crisis.

Public Significance Statement
This study reflects increased mental health difficulties within the United Kingdom during the current wave of the COVID-19 pandemic. Individuals' ability to tolerate uncertainty was predictive of mental health difficulties, and this was mediated by their coping responses. Future treatments could focus on supporting the general public to develop effective coping strategies and tolerate the uncertainty of the current climate, equipping them for potential future pandemic waves.

Keywords: COVID-19, intolerance of uncertainty, coping responses, mental health, physical health

Supplemental materials: http://dx.doi.org/10.1037/amp0000710.supp

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Open access Original research

BMJ Open

Psychological distress and trauma in doctors providing frontline care during the COVID-19 pandemic in the United Kingdom and Ireland: a prospective longitudinal survey cohort study

Tom Roberts ,[1,2] Jo Daniels,[3] William Hulme,[4] Robert Hirst,[5] Daniel Horner,[6] Mark David Lyttle ,[2,7] Katie Samuel,[5] Blair Graham,[8,9] Charles Reynard,[10] Michael Barrett ,[11,12] James Foley,[13] John Cronin,[14] Etimbuk Umana,[15] Joao Vinagre,[16] Edward Carlton,[17] on behalf of TheTrainee Emergency Research Network (TERN), Paediatric Emergency Research in the UK and Ireland (PERUKI), Research and Audit Federation of Trainees (RAFT), Irish Trainee Emergency Research Network (ITERN and Trainee Research in Intensive Care (TRIC))

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► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (http://dx.doi.org/10.1136/bmjopen-2021-049680)

Received 01 February 2021
Accepted 15 June 2021

ABSTRACT

Objectives The psychological impact of the COVID-19 pandemic on doctors is a significant concern. Due to the emergence of multiple pandemic waves, longitudinal data on the impact of COVID-19 are vital to ensure an adequate psychological care response. The primary aim was to assess the prevalence and degree of psychological distress and trauma in frontline doctors during the acceleration, peak and deceleration of the COVID-19 first wave. Personal and professional factors associated with psychological distress are also reported.

Design A prospective online three-part longitudinal survey.

Setting Acute hospitals in the UK and Ireland.

Participants Frontline doctors working in emergency medicine, anaesthetics and intensive care medicine during the first wave of the COVID-19 pandemic in March 2020.

Primary outcome measures Psychological distress and trauma measured using the General Health

Strengths and limitations of this study

- This paper presents key findings from a large cross-sectional longitudinal survey of practising emergency, anaesthetic and intensive care doctors in the UK and Ireland during the acceleration, peak and deceleration of the first wave of the COVID-19 pandemic.
- This study provides an insight into the personal and professional factors associated with trauma and distress and could be used to identify those doctors who will most benefit from psychological interventions.
- Variation in regional peaks may have influenced accurate capturing of psychological distress and trauma rates and have not been accounted for.
- The findings cannot be extrapolated to long-term psychological impact, and future work is planned to capture this.

Shielding from COVID-19:
Behavioural and psychological factors associated with distress in the vulnerable

1. What is the incidence of psychological distress in those shielding second wave of COVID-19?

2. Do those shielding others experience vicarious health anxiety?

3. How important are contamination fears and 'safety' seeking behaviours in relation to distress?

Methods

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Cross sectional questionnaire study using snowballing methods

Second wave national 'lockdown' – February 2021

Three groups

- Shielding self
- Shielding others
- Not shielding

Data taken from

- Short Health Anxiety Inventory (SHAI)
- The GAD-7 measure of anxiety
- Vicarious HAI

- Contamination subscale of the Padua Inventory
- COVID-19 related safety seeking behaviours scale

Preliminary analysis

852 in sampling period

723 completed all questionnaire

Final sample:

- Shielding self n=390; others n=69; controls =264
- 85% Female
- 94% White British
- Mean age =41.72 (SD=15.5)
- Shielding for 1 year (SD=2.80)
- Comorbidity high, 32% MH

Preliminary analysis

- Older participants were more health anxious
- Younger were more generally anxious
- Longer shielding duration higher rates of distress
- Higher distress if previous mental health difficulties
- No difference re COVID/vaccination – exposure only
- No difference re ethnicity or other factors

Results

1. What is the prevalence of distress in those shielding?

Questionnaire	Lockdown 1	Shielding self	Shielding others	Non-shielders
GAD-7	7.57 (5.53)	8.18 (5.62)*	6.77(5.38)	5.41 (4.68)
HAI	13.55 (7.27)	16.34 (6.96)*	10.70 (5.47)	11.31 (6.45)
FoC	-	23.97 (10.58)	22.59 (9.55)	19.88 (8.12)
SBS	-	23.09 (3.66)	23.43 (3.60)	20.01 (3.46)
vHAI	-	-	18.52 (7.72)	-

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SBS	-	23.09 (3.66)	23.43 (3.60)	20.01 (3.46)*
vHAI	-	-	18.52 (7.72)	-

- Mean values higher in shielding selves
- SBS comparable across groups but lower in non shielders
- Mean values higher in second wave

1. What is the prevalence of distress in those shielding?

	Norms	Shielding self	Shielding others	Lockdown 1
GAD-7	<10%	37.7%*	23.2%	30%
HAI	~5%	40%*	11.6%	24.1%
vHAI	-	-	50.7%	-

- Highest in SS shielding others
- Highly elevated in comparison to norms and first wave

2. Do those shielding other experience health anxiety or vicarious health anxiety?

	Norms	Shielding self	Shielding others	Lockdown 1
GAD-7	<10%	37.7%*	23.2%	30%
HAI	~5%	40%*	11.6%	24.1%
vHAI	-	-	50.7%	-

- Shielding others: high vHAI, GAD-7 and FoC, but not SBS or their own health ($p<0.01$)
- vHAI higher in shielding others than in control group
- No relationship with any of the demographic variables including diagnosis of COVID
- 10% variance in vHAI accounted for FoC, no demograpics relevant here.

3. What is the role of contamination and safety seeking behaviours

- Higher the FoC and SBS, more anxious and health anxious (p<0.01)
- Non-shielders significantly lower medians on SBS (p>0.05) and FoC but not in comparison to those shielding others

Safety Behaviour Scale Item (1-5)	Median
Washing hands and using hand sanitizer	3
Wearing a face covering	3
Avoiding other outside of your household	4
Getting COVID-19 tests	3
Stocking up on essentials	3
Checking internet for information on COVID-19	3
Attending clinical appointments	3

Most in compliance with government guidance

- Those in 'more than government guidance' group more anxious (U=4912.50. z=-4.99, p<.00.1) and more health anxious (U=5163.00. z=-4.00, p<.00.1)

Shielding others

```
Frequency    Stem &  Leaf

     .00       1 .
    9.00       1 .  556899999
   37.00       2 .  000011111222222223333333333344444444
   18.00       2 .  555566677777788899
    4.00       3 .  0012

Stem width:     10.00
Each leaf:       1 case(s)
```

Shielding self

```
Frequency    Stem &  Leaf

    4.00 Extremes    (=<13.0)
    1.00       14 .  0
    8.00       15 .  00000000
    3.00       16 .  000
    7.00       17 .  0000000
    9.00       18 .  000000000
   27.00       19 .  000000000000000000000000000
   20.00       20 .  00000000000000000000
   55.00       21 .  0000000000000000000000000000000000000000000000000000000000000
   30.00       22 .  000000000000000000000000000000
   45.00       23 .  000000000000000000000000000000000000000000000000000
   31.00       24 .  0000000000000000000000000000000
   37.00       25 .  0000000000000000000000000000000000000
   31.00       26 .  0000000000000000000000000000000
   34.00       27 .  000000000000000000000000000000000000
    7.00       28 .  0000000
   19.00       29 .  00000000000000000000
    1.00       30 .  0
    3.00       31 .  000
    2.00       32 .  00
    3.00       33 .  000

Stem width:      1.00
Each leaf:       1 case(s)
```

Hierachical regression analyses

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Generalised anxiety

- Demographics and control variables accounted for 16% of the variance in anxiety - age, gender, mental health & group, not exposure to COVID
- FoC and SBS additional 7%
- In final model, only FoC contribution significant (B = .261, p <.001), safety seeking behaviours non-significant (B = .039, p =.456) to overall model (R^2=.24, F(8, 1682)=27.72, p<.001)

Health anxiety

- Demographics and control variables accounted for 19.6% of the variance in anxiety – gender, mental health & group, not exposure or age
- FoC and SBS added an additional 9.2%,
- In final model fear of contamination contributed significantly to the model (B = .212, p <.001), safety seeking behaviours did not (B = .092, p =.203) (R^2 = .29, F(8, 681) = 34.34, p < .001.

Conclusions

Key findings

- Enduring high rates of distress
- Those shielding others anxious about health but not their own
- Doing more than necessary likely to cause more distress
- Key role of fear of contamination

Clinical implications

- Recognition of vicarious health anxiety and associated responsibility

- Working with “threat perception” and uncertainty

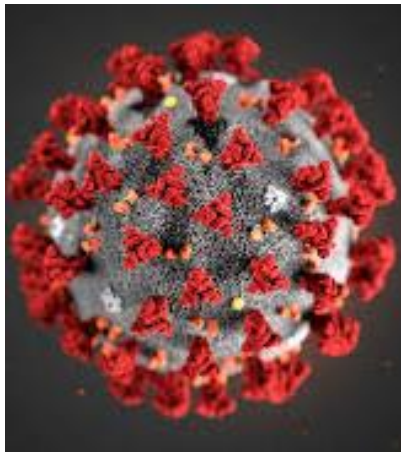
    - Accuracy of Knowledge
    - Operationalising
    - Normalising
    - Appraising threat perception
    - Targeting “over engagement”
    - Cognitive restructuring

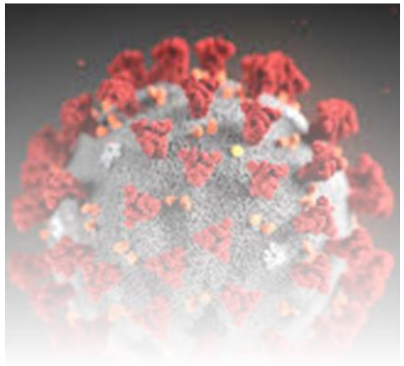
Considerations

- Development of vHAI
- No formal diagnostic interview
- Sampling issues

Future directions

- Analysis of ‘dyads’ in study
- More research into vicarious health anxiety
- Longer term follow up of this group





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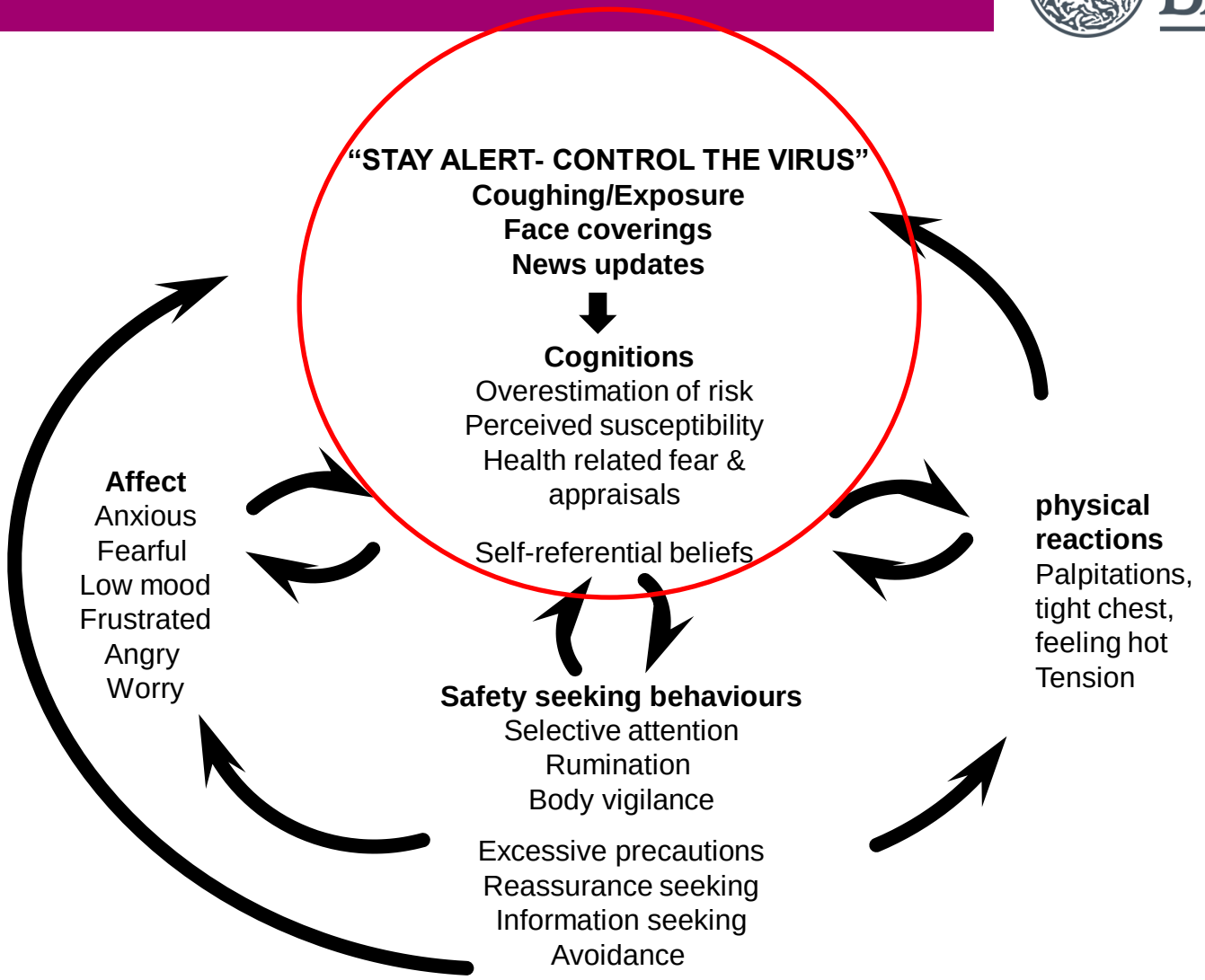
"STAY ALERT- CONTROL THE VIRUS"
Coughing/Exposure
Face coverings
News updates
Cognitions
Overestimation of risk
Perceived susceptibility
Health related fear & appraisals
Self-referential beliefs
physical reactions
Palpitations, tight chest, feeling hot
Tension
Safety seeking behaviours
Selective attention
Rumination
Body vigilance
Excessive precautions
Reassurance seeking
Information seeking
Avoidance
Affect
Anxious
Fearful
Low mood
Frustrated
Angry
Worry