

Impact of Covid-19 on academic resilience and achievement emotions in undergraduate students

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Presentation Overview

- Rationale and theoretical background
- The present study: Aims and objectives
- Methods
- Findings
- Implications and future directions

Rationale

- Part of a broader study during 2019-2020 exploring the impact of resilience and achievement emotions on 1st year student attainment and attendance.
- Recognition of the importance of capturing the impact of Covid-19. For example;
 - the significant lifestyle changes happening very quickly: isolation, on-line communications, health and financial concerns and bereavement.
 - the academic context: of changes to on-line learning and assessments led to worries about academic outcomes (Gogoi et al., 2022), concerns about communication, technical issues and achievement (Almossa, 2021).
 - Impacts on health, wellbeing and motivation (e.g. Fong, 2022; Gogoi et al., 2022).

Academic resilience

- Resilience is the capacity to deal with adversity (e.g. Masten et al., 1990)
- Encompasses a range of factors, such as adaptability, self-esteem, goal-orientation and problem-solving (Cassidy, 2016)
- Academic resilience corresponds to the specific challenges and stressors within an educational context (Martin & Marsh, 2006)
- Possible correlation between resilience and achievement (Ghanizadeh, 2021)
 - all students will experience poor performance and challenges but a lack of resilience may equal an inability to bounce back from this (Martin & Marsh, 2006)
- Evidence that resilience does not impact on achievement (e.g. Cheng & Catling, 2015) but it is important for wellbeing (e.g Cheng & Catling, 2015; Frigborg et al., 2006).

Academic Resilience

- Academic resilience factors can be broken down into:
 - Perseverance (e.g. accepting feedback, adversity as opportunity, imaginative problem-solving)
 - Reflecting and adaptive help-seeking (reflect, adapt and monitor changes, seek help and support)
 - Emotional coping

Achievement emotions: Control Value Theory (CVT: Pekrun, 2006)

CVT explains how cognitive appraisals impact on academic performance.

These appraisals are based on evaluations of control and value.

- how they interpret their capabilities of gaining success or avoiding failure (i.e., control)
- how important a student appraises a learning activity or its outcome (i.e., value)

Achievement emotions (e.g. hope, anxiety, boredom) are triggered by these appraisals

CVT proposes 8 Achievement Emotions

<u>Emotion</u>	<i>Valence</i>	<i>Activation</i>	<i>Objective Focus</i>	<i>Timeframe</i>
Enjoyment	<i>Positive</i>	<i>Activating</i>	<i>Activity</i>	<i>Present</i>
Hope	<i>Positive</i>	<i>Activating</i>	<i>Outcome</i>	<i>Future</i>
Pride	<i>Positive</i>	<i>Activating</i>	<i>Outcome</i>	<i>Past</i>
Anger	<i>Negative</i>	<i>Activating</i>	<i>Activity/ Outcome</i>	<i>Present/Past</i>
Anxiety	<i>Negative</i>	<i>Activating</i>	<i>Outcome</i>	<i>Future</i>
Shame	<i>Negative</i>	<i>Activating</i>	<i>Outcome</i>	<i>Past</i>
Boredom	<i>Negative</i>	<i>Deactivating</i>	<i>Activity</i>	<i>Present</i>
Hopelessness	<i>Negative</i>	<i>Deactivating</i>	<i>Outcome</i>	<i>Future</i>

Achievement emotions

Positive activating emotions: Enjoyment, pride and hope.

- Generally linked with self-regulation, self-efficacy and engagement.

Negative activating emotions: Anger, anxiety shame.

- Most often associated with impaired motivation, satisfaction and burnout. Though they can provoke learning strategies to avoid failure.

Negative Deactivating emotions: Boredom and hopelessness.

- Linked to amotivation and attentional problems

Research Questions

- The aim of the study was to explore students' perceptions of their academic resilience, as well as their positive activation, negative activation, and negative deactivation achievement emotions.
- Specifically, it sought to examine whether these concepts may be differentially associated with how students felt they were impacted at university during the Covid-19 restrictions.
 - Do the psychological constructs of resilience and achievement predict academic outcomes?
 - How has Covid impacted on the different student characteristics, attainment, motivation and resilience?

Method: Procedure

Participants were first year undergraduate students

Data collected from April to June 2020

End of year attainment data was also collected from official records for years 1, 2 and 3

Quantitative and qualitative data

Data Analysis: Linear Regression Models

Method: Participants

A total of **122 first year undergraduate students** participated in the study

- 32 male, 89 female, 1 non-binary.

Mean age 19.76 years (SD = 4.13 years; range 18–57 years)

Students **varied in their degree programme** and academic subject:

- Sport and Exercise Sciences ($n = 27$)
- Psychology ($n = 64$)
- Foundation Studies ($n = 31$)

Students **differed in the entry-qualifications:**

- Traditional A-levels ($n = 88$)
- BTEC qualifications (specialist work-related qualifications in the UK; $n = 8$)
- A combination of A-level and BTECs ($n = 15$)
- ACCESS courses or alternative qualification options ($n = 11$)

Ethnicity was predominantly White ($n = 113$)

- Remaining students were from Black, Asian or Minority Ethnicities (BAME; $n = 7$)

Method: Measures

Academic Resilience

- Students completed the Academic Resilience Scale (ARS-30; Cassidy, 2016)
 - Perseverance (14 items, $\alpha = .86$)
 - Emotional Response/Negative affect (7 items; $\alpha = .84$)
 - Reflection/ Help-seeking (9 items; $\alpha = .83$)

Achievement Emotions

- Students completed the Achievement Emotions Questionnaire online (Pekrun, Goetz & Perry, 2005)
- Related to general learning activities at university

Method: Measures

Dealing With COVID-19 Questions

- Students were asked to complete a series of questions indicating how they felt they were coping with the impact of the Covid-19 disruption
 - Changing Learning Environment (5 items regarding shift to online teaching; $\alpha = .78$)
 - Well-Being (3 items of impact of welfare; $\alpha = .72$)
 - Academic Isolation (2 items on limited contact with staff/classmates; $\alpha = .73$)
 - Changes To Assessment (2 items; $\alpha = .82$)
- There were 2 open questions in this survey
 - 'Please provide details about how you believe Covid-19 has impacted your learning since the change to remote learning'.
 - 'Please outline how you believe Covid-19 has affected your academic experience during the first year of your studies at University'.

End of Year Attainment

- Tracked over year 1, 2 and 3

Results



Descriptive Statistics

Variable	Range	Mean	SD	Variable	Range	Mean	SD
<i>Academic Resilience</i>				<i>Dealing With Covid-19 Impact /</i>			
Perseverance	1-5	4.02	0.55	Learning Environment	1-7	4.10	1.38
Emotional Responses	1-5	2.80	0.81	Well-Being	1-7	3.55	1.22
Reflection/ Help-Seeking	1-5	3.74	0.67	Isolation	1-7	3.12	1.33
<i>Achievement Emotions</i>				Assessments	1-7	3.83	1.64
Enjoyment	1-5	3.45	0.70	<i>Academic Attainment</i>			
Hope	1-5	3.18	0.73	Year 1	%	62.48	9.91
Pride	1-5	3.43	0.81	Year 2	%	64.28	7.90
Anger	1-5	2.42	0.87	Year 3	%	61.74	10.60
Anxiety	1-5	3.02	0.80				
Shame	1-5	2.99	0.86				
Boredom	1-5	2.55	0.84				
Hopelessness	1-5	2.63	0.99				

Do the psychological constructs of resilience and achievement predict academic outcomes?

- **No aspect of resilience had any association with academic attainment**
 - This was consistent at years 1, 2 and 3
- **Only the achievement emotion of Pride had an association with academic attainment**
 - The positive association was seen in both year 2 ($B = 1.88, p = .036$) and in year 3 ($B = 2.95, p = .018$)

Dealing With the Impact of Covid-19: Resilience

Changing Learning Environment

- Emotional response positively associated ($B = .23$, $p = .02$)
- Reflection/ Helping positively associated ($B = .21$, $p = .06$)
- Perseverance had no association ($B = .06$, $p = .63$)

Well-Being

- Only Emotional Response positively associated ($B = .32$, $p < .001$)
- Reflection/Helping ($B = .13$, $p = .25$) and Perseverance ($B = -.09$, $p = .43$) had no association

Isolation

- No aspect of resilience had any association with dealing with isolation

Changing Assessments

- No aspect of resilience had any association with dealing changes to assessments

Dealing With the Impact of Covid-19: Achievement emotions

Changing Learning Environment

- Enjoyment was the only emotion associated with helping deal with the changes to learning environment ($B = .38, p = .03$)

Well-Being

- Feelings of anxiety ($B = -.34, p = .03$) and shame ($B = -.32, p = .05$) associated with poorer dealing with well-being during the Covid-19 disruption

Isolation

- Feelings of shame ($B = -.37, p = .03$) negatively associated with poorer dealing with isolation from staff and classmates during Covid-19 disruption

Changing Assessments

- No achievement emotions were associated with dealing with changes to assessment

Qualitative findings: Overview

Negatives

- Lack of motivation was identified as a problem
- Trying to study at home was difficult due to distraction and lack of facilities/technologies.
- Guidance and support, from lecturers and peers, was negatively affected.
- Students found it difficult to concentrate during on-line lectures.

Positives

- More flexibility
- More time for academic reading and working at own pace

It's hard for me to participate in live online sessions as my dad is working at home and is often on video conferences, so the WiFi is slow for me and often disconnects... I always catch up afterwards by access [to] the lecture slides, but it often takes longer than it should as my mind wanders more easily than in an actual lecture. It can be harder to sometimes understand all of the material without my friends on my course to instantly discuss things with.

It has meant that I was able to complete it in my own time without falling too much behind while being able to look after my family too.

Qualitative findings: reflect a mixed experience

It's much harder to find motivation to study as well as the right learning environment, with my whole family being off work and school. However, the cancellation of exams enables more time to read up on course content to gain knowledge rather than the pressure of having to memorise it for an exam.

While it is nice to have the flexibility of doing school work at your own pace, it has made it much harder to be motivated to actually do the work.

Covid has made it harder for me to engage with tutors and assessments ... however it has allowed me to focus more on extra reading and family time

It has decreased my motivation to do work. Moving back home means I no longer have a free designated study space for my uni work and supplies. Although it has allowed me to work at my own pace.

Key Findings

- The findings suggest that students with higher levels of resilience coped better with changes to their learning during the pandemic.
 - This could be due to lower anxiety about the future (Paredes et al., 2021).
- Greater wellbeing was associated with more positive emotional resilience. Lower wellbeing was associated with anxiety and shame.
 - Anxiety and shame may emanate from lack of control and self-blame.
- Isolation was associated with shame.
- Resilience was not found to explain academic attainment.



Recommendations

- Developing strategies that foster higher resilience in student cohorts across the academic year may be beneficial in helping both wellbeing and the ability to deal with instances of major disruption to academic learning and teaching sessions.
- Further exploration of the specific emotions associated with attainment and wellbeing.
 - What is the relationship between pride and attainment
 - What factors influence shame and anxiety and how can we address these factors.
- Students identified a negative impact on motivation with the removal of extrinsic motivators such as exams and attendance
 - Further work to explore the influence of motivators on attainment and wellbeing from a self-determination theory perspective (Deci & Ryan, 2008) would be worthwhile.
- Further analysis of the qualitative data could contribute to future decision-making regarding academic learning and teaching.



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