St Andrews Research Culture Survey Report 2021

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University of
St Andrews

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Word cloud generated from participants' responses to:

"Suggest three words describing the University of St Andrews Research Culture."

Contents

Executive Summary

The report outlines the findings from the University of St Andrews Research Culture Survey conducted in March 2021. The findings provide a detailed picture of perceptions and experiences shared by the University of St Andrews staff and postgraduate students. The survey was conducted during the Covid-19 lockdown of 2021 and considered themes and issues relating to the draft Research Culture Vision, developed by the University Research Culture Group in 2020. This survey and its findings are strengthened by its robust design and broad inclusion from across our diverse community. These features also underpin its distinct contribution.

What Did We Do?

Survey topics were drawn from the extant literature and the University Draft Research Culture Vision (2020). These were: collegiality and competition; equality, diversity and inclusion; collaboration and interdisciplinarity; career development and structures in academia; research integrity; openness and fairness in research and evaluation; safety, dignity at work, bullying and harassment; mental health and well-being; work-life balance; research satisfaction; research leadership. An additional emerging theme within our data was the impact of Covid-19 on research culture.

Closed-ended questions required tick-box response scales (0=don't know, 1-5 indicated level of agreement with statement, where 5=max agree). There was also opportunity for individuals to provide open-ended comments on each topic.

This report provides an overview of quantitative analysis of the closed-ended questions and selected representative quotes from the qualitative data. Participants' comments are used throughout the report to highlight key perspectives and to expand on the quantitative findings.

Who Took Part?

Distinct from other surveys, staff from all job families and postgraduate research students participated in the survey (N = 670), providing over 3000 comments to open-ended questions (see section 1.3 for details of demographics). A major strength of our survey was the breadth and level of community engagement (around 15%[1] of those invited, representing around 22% of those likely to have a direct interest in research).

Figure 1: What is your ethnicity? (N=605)

Ethnicity	Count
White	499
Asian	28
Mixed race	26
Black	5
Arab	1
Other	17
Prefer not to say	29

Responses were analysed in relation to gender, age, ethnicity, job family and discipline. The gender balance between men and women was 40:54% (6% other). A major strength of our survey was engagement from the Arts and Divinity (AD)[2] community (48%) compared with Science and Medicine (SM) disciplines (52%). This is notable because other surveys have been biased very much towards SM participants. Figure 1 shows the number of participants who reported ethnicities in each

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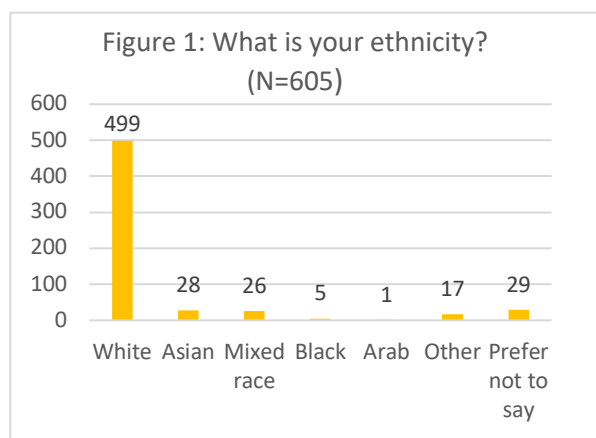
[1] Percentages are rounded up if they are above the 0.5 mark and down if below. Due to this rounding strategy, aggregated percentages may not equal 100%.

[2] The terminology used here stems from University structures. AD includes Arts, Divinity, Humanities and Social Sciences, SM includes Sciences and Medicine. We used self-report of discipline from participants.

category[3]. In total, 12% of participants were from Black, Asian and Minority Ethnic (BAME) backgrounds.

What Did We Find?

There were significant variations in answers between demographic groups for some closed-ended questions. Qualitative data reinforced the importance of some of these differences and of minority views (across all themes).

Positive and negative aspects of research culture across the University were revealed as themes emerging from the data. We have broken these into three broad areas:

Responses indicating that research culture policies, processes, and practices should continue on their current trajectories

- Some research-related policies were perceived as working well and are embedded in our research culture, in particular those related to research integrity.

- Flexible working policies were perceived as working well and supporting a diverse community to engage effectively in research.

- A high proportion of participants reported feeling included in the research community.

- The research endeavour itself was thought by the majority to be positive for mental health and many participants shared that they found conducting research life-affirming and fulfilling.

Responses indicating mixed opinions and experiences worthy of further exploration and consideration

- There were notable constructive lessons to learn from the both positive and negative lived experience of researching through Covid-19.

- A minority of respondents revealed some interesting potentially positive benefits of what we have learned during the Covid-19 crisis, particularly in relation to forming and maintaining relationships with colleagues.

- Differences were observed in how the terms 'collegiality', 'collaboration' and 'interdisciplinary' were understood and applied across disciplines, and how varying definitions impact on the building of social networks and resources across the University.

- Pressures from the external research context (e.g. REF, paper review and grant review) were identified as contributing to potential problems with research evaluation and as impacting on wellbeing.

- Participants felt the University could develop Open Research better with more resource.

- Many felt that the University and the wider research context took advantage of individuals and their passion for their research work, and that this had a negative impact on health, career opportunities and long-term research outcomes.

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[3] Note: numbers of respondents is different for every question, and always less than the total number of respondents, as some participants chose not to answer all questions.

- Whilst many participants expressed satisfaction with their work-life balance, others found it very difficult (although expected) to balance research with other commitments, especially teaching.

Responses indicating there is a need for specific attention

- The negative impact and likely under-reporting of bullying and harassment, including deficit of trust in reporting policies and mechanisms.

- Negative impacts of short-term contracts on individuals and on the research system were identified.

- There were considerable challenges of balancing research with increasing teaching and administrative demands.

- There was low awareness of, and trust in, policies around career progression and promotion.

- Less than half of participants were aware of local training and mentoring opportunities.

- The negative impact of Covid-19 was different for specific groups (in particular, discipline and gender).

- The majority of participants felt the University should be doing more to support and include BAME researchers.

- Disability, mental health and wellbeing were areas where respondents felt policy and practice could be improved.

- Fair recognition of contributions to research and authorship and fair allocation of grant funding were all highlighted as significant concerns.

- The increasing demands of teaching and administration and an established culture of long-hours working across the University were identified as contributing to a negative research culture.

What We Plan to Do Next

- Findings from the study will be shared with the University's Research Culture Group (RCG) the Research, Impact and Innovation Committee (RIIC) and the St Andrews research community (from August 2021 onwards).
- We will create further dialogue with the community of the University of St Andrews to explore themes and potential further actions through focus groups or interviews, highlighting key areas for improvement and identifying purposeful and appropriate actions that could be taken to support a positive post-pandemic research culture (August 2021- May 2022).
- We will explore how external influences common to Higher Education research contexts, nationally and internationally, are impacting on the development of positive research culture. How is progress in research culture measured across the sector? What are the core elements of positive and productive research cultures? (We aim to secure external funding to pursue this further).

1.0 Introduction

1.1. The Landscape of Research Culture

Research culture refers to a set of actions carried out by all the actors or agents that form part of a research community: statutory bodies, institutions, journals, publishers, accreditation agencies, entities that support or finance research (ministries, private entities and philanthropic foundations) as well as researchers themselves (Frias-Navarro et al., 2020). Research culture encompasses the behaviours, values, expectations, attitudes and norms of our research communities. It influences researcher career paths and determines the way that research is conducted and communicated (The Royal Society, 2017). A positive research culture has been identified as a key element of a high performing research context, ensuring that the quality and integrity of research is maintained (Bland & Ruffin, 1992). Recently published reports by the UK Government (Dept for Business and Industry Strategy, 2021) and the Scottish Funding Council (Scottish Funding Council, 2021) emphasise the need for research culture to adapt to ensure a stable and appropriately skilled research workforce is available within the UK.

Conceptualisations of positive research culture have consistently identified the following key areas: research integrity, openness and transparency; career development, including work-life balance; collaboration; collegiality; equality, diversity and inclusion (Casci & Adams, 2020; Chaplin & Price, 2018; Lauchlan, 2019).

Concerns around research culture have been discussed widely across the research eco-system, with a number of prominent bodies and institutions publishing research culture studies in recent years including The Royal Society (2017), the World Economic Forum (Chaplin & Price, 2018), University of Glasgow (Adams & Casci, 2019), Vitae, commissioned by UK Research & Innovation (Metcalfe et al., 2020), the University of Edinburgh (Macleod et al., 2021), and the Russell Group (Gottlieb et al., 2021). One of the most influential studies has been the Wellcome Trust Survey and Townhall Reports (Wellcome Trust, 2020). The majority of these studies were conducted before the Covid-19 pandemic and focused on Science and Medicine (SM) research contexts with a small number of respondents from Arts, Humanities and Social Sciences (in this report we will use local convention and refer to the latter as Arts and Divinity disciplines, AD). Insights from the above studies were drawn from quantitative analysis of responses to closed-ended tick-box questions, with some studies involving additional workshops and focus groups providing qualitative data from different groups of participants.

1.2. A Specific University of St Andrews Research Culture Survey

St Andrews is a small university with a rich research culture in AD, as well as SM. Maintaining a healthy and productive research culture across all disciplines is core to delivering the ambitions of the University Strategy 2018-2023 and is embedded in the ambitions of the enabling strategies, in particular the People Strategy and Diverse St Andrews. The University established a Research Culture Group (summer 2020) and produced a draft Research Culture Vision (late 2020, Appendix 1). The insights from this research culture survey will be used to inform future development of the research culture vision and research culture initiatives at St Andrews.

Findings from previous research culture studies and the University of Glasgow Lab for Academic Culture all point to the need to understand the internal and external landscapes of research culture in individual and localised contexts. To do this we collected both quantitative and qualitative data from the same participants, offering insight into how aspects of research culture impacts groups and individuals across the University.

The survey also captured different perspectives of the impact of the Covid-19 pandemic on research for individuals, groups and the community across the University. This survey will augment the findings of the recently conducted 'People Strategy Survey' and the 'All Staff Survey on Working in the Context of Covid-19', as well as the ongoing national 'Culture, Employment and Development of Academic Researchers Survey', to provide insights on where the University community has opportunities to enhance research culture as we move forward from pandemic restrictions. Our Research Culture Survey is distinctly different from other existing surveys. We wanted to involve as many stakeholders as possible, including professional services staff engaged with research culture or who had a view of research culture, research students, and different groups of researchers. We also wanted to specifically include Arts, Humanities and Social Sciences because these categories have been under-represented in many other surveys. Our survey design was also unique, collecting both qualitative and quantitative data on the same population, to reveal themes that might not be captured by the quantitative analysis alone.

1.3. Survey Design and Participation

Our aim was to design a survey that covered most of the research culture elements whilst still being manageable to complete, avoiding survey fatigue. We based our survey on the University's draft Research Culture Vision (Appendix 1) and included demographic questions, tick-box questions with closed responses ranging from 0 to 5. The topics for the closed question responses were: collegiality and competition; equality, diversity and inclusion; collaboration and interdisciplinarity; career development and academic structures; research integrity, openness and fairness; safety and dignity at work, including bullying and harassment; mental health and wellbeing; work-life balance.

An open-ended question was also included in each theme, giving participants the option to add details for each topic. The survey ended with further open-ended questions asking participants to comment on good research culture practices in the University; what the University could do to improve research culture; and how Covid-19 has affected how people feel about research culture.

Finally, participants were invited to provide 3 keywords that they would associate with research culture at the University of St Andrews. These have been synthesised to form the word cloud presented on page 2 of this document.

We directed the survey towards a broad range of staff and postgraduate research students, aiming to include anyone who felt that their work contributed to the research effort. The response was as follows: 670 participants, with around 15% of those invited taking part, representing around 22% of those likely to have a direct interest in research.

The survey and analysis methodology was subject to full ethical approval by the University Teaching and Research Ethics Committee (UTREC).

Demographic data were collected about ethnicity (Figure 1), age, gender, discipline, job family, and which year participants completed a PhD (where appropriate):

- **Ethnicity**: White (82%), Asian (5%), Mixed (4%), Black (1%), Prefer not to say (5%), Arab (0% - 1 person), Other (3%).

- **Age range**: 20-29 (27%), 30-39 (27%), 40-49 (21%), 50-59 (18%), 60-69 (6%), 70+ (1%).

- **Gender**: Men (40%), Women (54%), Prefer not to say (4%), non-binary/other (2%).

- **Discipline**: Arts and Humanities (32%), Social Sciences (16%), Science (47%), Medicine (5%).

- **Job Family**: Research and Teaching (39%), Research only (17%), Education Focused (5%), Professional Services (13%), Research Students (21%), Other (5%).

- **PhD completion date (where applicable)**: answers ranged from 1971 to 2021.

We did not specifically ask respondents to report their disability status. Further details of who participated from each demographic can be found in Appendix 2. A copy of the survey is available in Appendix 3.

1.4 Data Analysis and Reporting

We tested whether any themes could be captured that linked specific demographics to the tick-box and open-ended question responses from the survey. The responses to closed-ended questions were based on a 5-point scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree). An "I don't know" option was included, in case the question was not relevant to some participants. This response was coded zero and was excluded from the analysis. Participants could also leave any question unanswered.

A holistic approach was used to draw out key results using both the quantitative and qualitative data. Quantitative data were used to summarise key results, and to provide pointers to explore the qualitative data. For each question, we tested for significant differences across demographics (using uncorrected t-tests, $p<0.05$ defined as the level at which a result was significant), and we looked for questions that resulted in particularly high or low scores. We found no very large differences between different demographic groups, but we did find a few small, yet significant, differences. This report includes a variety of charts and graphs to illustrate the major points delivered by the quantitative data. To view all the significant differences found in this study, refer to Appendix 4. We were also interested in questions that delivered bimodal score distributions (e.g., a majority high, but also many respondents scoring low) and some of these are presented below.

In addition to the quantitative information, the 670 respondents to the survey provided over 3000 individual comments. Qualitative analysis of these open-ended comments was conducted over multiple cycles of coding within NVivo software (QSR International Pty (Ltd.), 2020). Following an initial cycle of indigenous coding, where ideas were coded in relation to the language used by the participants, three cycles of thematic coding were informed by the quantitative analysis of tick-box data. The emerging findings uncovered five prevalent themes (Sections 2.1-.2.5 below). These themes were drawn from the draft University Research Culture Vision, have emerged across the research culture literature, and have been highlighted in other research culture surveys. A further two themes were related to experiences of the Covid-19 pandemic (Section 2.6, 2.7). A number of subthemes emerged. A summary report of the distribution of themes and subthemes is provided as Appendix 5. Some of the subthemes were interconnected and provided granular evidence to support findings from the quantitative analysis on how research culture is experienced differently across the University community.

The exemplar statements provided within this report have been selected to illustrate the range of views and experiences shared by participants from the University of St Andrews. The demographic information relevant to each quote has been limited, and some quotes edited, to maintain anonymity for respondents. Statistically significant differences between different demographic groups in the quantitative data were used to guide analysis of the qualitative data. The discussion below also includes a number of themes where there were no observed differences between demographic groups in either qualitative or quantitative data.

2.0 Findings by Theme

For each theme, we describe below the key quantitative results, qualitative results using direct quotes from respondents, and each section ends with a 'key points' summary, based on a combination of quantitative and qualitative analysis. For the former, we highlight any significant differences between demographics, or where there was a divergence of views across respondents, or where there was a strong majority view. For the latter, we used standard qualitative techniques to obtain the most salient themes, guided by our starting themes, others that emerged, and the quantitative results. These are illustrated using exemplar quotes as described above. In sum, the findings are derived from the data. The balance of points made in the report are aligned to the balance of commentary in the data.
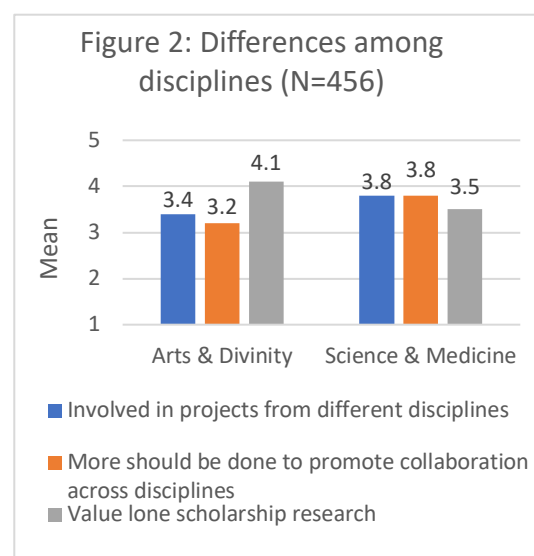
Two subthemes that generated a small number of direct comments were flexible working and disability. The term 'flexible working' appeared in a small number of comments, however the significance of the theme was amplified in relation to comments coded to EDI, caring responsibilities and work-life balance. Contributions relating to disability highlighted the lack of attention it receives across the University generally, so this important commentary has been included as an analysis theme.

2.1 Collegiality, Collaboration and Interdisciplinarity

Our results revealed some demographic differences in how colleagues work together, and across disciplines. We also learned that these three terms have potentially rather different meanings for different disciplines.

Quantitative Analysis

The analysis on collegiality, collaboration, and interdisciplinarity revealed that there were significant differences in mean score between participants based on their disciplines (AD vs SM, see Figure 2). Since we used a 5-point scale as a measurement for all the items (1= strongly disagree to 5= strongly agree), a higher mean score reflects a higher degree of agreement. AD valued lone scholarship research more than SM. In contrast, SM were involved in more projects across disciplines compared to AD and were keener to see collaboration promoted across disciplines. A factor analysis was conducted on all the items related to collegiality, collaboration, and interdisciplinarity (9 items)[4] to examine whether there were distinct dimensions demonstrating that these concepts are unique and separable. However, the analysis revealed no distinct dimensions, suggesting that respondents understand these terms in different ways.

Figure 2: Differences among disciplines (N=456)

- Involved in projects from different disciplines
- More should be done to promote collaboration across disciplines
- Value lone scholarship research

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[4]We conducted an exploratory factor analysis using principal axis factoring with oblimin rotation. The analysis yielded four factors with an eigen value greater than one that explained 21% of the variance. Based on the low variance, difficult interpretation of the factors, and the scree plot, the analysis did not show any unique distinctions between the items.

Qualitative Findings

From the existing literature we reviewed, collegiality appears to have both positive and negative connotations:

> *"One side is characterized by institutional and collegial supportiveness, encouragement, and interactions with colleagues, and seen as central to sustaining, creating and developing a vibrant and exciting research environment. The other side pertains to the shortcomings that accompany a strong research culture. The marginalization of some academics, the creation of a potentially divisive working environment, and the possibility of competitive and aggressive behaviour are three such downsides identified in our discussions."* (Tucker, 2019)

Concerns around the negative implications of collegiality were echoed in the University survey:

> *"I would argue collegiality tends to benefit the most senior male members of staff most. Women, particularly young women, women on temporary contracts, or women in more junior roles are expected to do the work of collegiality (mostly taking on pastoral, support, roles or heavier teaching duties, more onerous admin roles) without seeing much of the benefits of collegiality."*
> **Female, Professional Services**

Collegiality as a positive aspect of research culture was also acknowledged by some participants:

> *"As a new member of staff, I have found collegiality at St Andrews to be genuinely present which is something I value and feel very encouraged by. Competitiveness has not yet been apparent to me, and again I am so encouraged by this."*
> **Female, Research-Teaching, SM**

Other comments indicated that levels of collegiality vary between contexts within the University:

> *"While my personal experience of being involved in research related projects has always been really collegiate, I am aware that this same level of collegiality is not present among all researchers."*
> **Male, Research, SM**

The concept of collegiality appears to link and to some extent overlap with the concepts of interdisciplinarity and collaboration. However, some participants were unclear about how collegiality, collaboration and interdisciplinarity were being understood within the University culture vision and survey:

> *"Collegiality is a word that has become meaningless"*
> **Other-non-binary-undisclosed gender, Research-Teaching, AD**

> *"Collaboration is not the neutral word this form proclaims it to be."*
> **Male, Research-Teaching, SM**

The lack of shared understanding of the concepts re-emerged during preliminary knowledge-sharing sessions with different stakeholder groups across the University, suggesting that any future research culture vision document might benefit from an explicit definition of these terms.

There were suggestions from the survey, particularly from participants earlier in their career, that the University does not reflect the positive contribution of collegiality within promotion structures:

> *"Collegiality is expected by the university, and is talked about a great deal. But individualism is rewarded in academic promotion structures. The new promotion regulations don't seem to help. Service roles are often highly collegial, cooperative and self-sacrificing (especially in*

terms of time required). 'Service' now seems to be held very much a second to 'research/impact' and 'teaching'."
Other-non-binary-undisclosed gender, Research Student, SM

"The University of St Andrews, like other Universities in the UK, does not promote collegiality. The University is now a corporate environment in which competition, ambition and self-promotion are prized against collegiality, mutual support and fairness."
Other-non-binary-undisclosed gender, Education-Focused, AD

The external research context, particularly structures for funding and rankings, including REF, was suggested as having a negative impact on collegiality:

"It's not so much about collegiality- that depends a lot on the people rather than on the institution, although it must be said that St Andrews is definitely better on that side compared to Oxbridge while achieving the same level-, it is about competition: the REF is a concrete proof of a requirement that can implicitly destroy collegiality."
Mixed or Multiple Ethnic Groups, Research Student, SM

"The current atmosphere is one of pitching researchers (especially early career) against each other when they apply for funding. This creates an extremely detrimental research culture of mistrust among the very cohort who should be drawing together to be creative and support each other. It's almost exactly the opposite culture of what one would want. Both for happiness and success."
Female, Professional Services, AD

Internal organisational structures were identified by some participants as potential obstacles to interdisciplinary collaboration:

"Hurdles for interdisciplinary research (or teaching) at the university are high. Often the degree structures themselves make collaboration impossible. Also, not all projects are suitable for collaboration."
Male, Research Student, SM

Further barriers to effective interdisciplinary collaboration included poor recognition for interdisciplinary funding through University finance structures, and the difficulty of publishing interdisciplinary work in high-ranking journals, complicated by using journal ranking as a perceived measure of professional success:

"Collaborative research takes a lot of time, it takes longer to produce outputs and those outputs are likely to be in lower ranked journals. I think this is rhetorically appreciated but not functionally recognized. For example in the promotions or academic review procedures documents there is no section to highlight the interdisciplinary nature of your work (other than in environment) and the knock on effects to publications."
Female, Research-Teaching, AD

"Collaborative research is not completely valued by the University. For example, the tendency of FAS to only store the name of the PI (and not Collaborator's) already indicates that being PI is the only thing that counts. More could be done to emphasise the value we give to collaborative research at all levels."
Male, Research-Teaching, MS

There were suggestions that successful collaborations were more likely to evolve across disciplines rather than being imposed through University structures and that no single University-wide structure would be appropriate to all contexts:

> *"Collaboration can work if there is a shared goal or objective and agreement on reaching it; forcing collaboration is not the mechanism for encouraging it, for example, by putting three Schools in a common space (Madras) in the belief that it will magically create collaboration.*
> **Male, White, Professional Services**

While participants from both groups of disciplines recognised the values of collaboration, there were differences in how these disciplines perceived the importance of lone scholarship.

The importance of having facilities to create purposeful collaboration but also to recognise and support lone scholarship was highlighted across all disciplines:

> *"There needs to be a place for all kinds of scholars. Some, like me, are good at collaborating and think in that way. Others are lone scholars, or blue skies thinkers, and need to work more independently."*
> **Male, Research & Teaching, SM**

Key points emerging from this theme:

The terms collegiality, collaboration and interdisciplinarity were understood and interpreted in different ways. Creating a common understanding of these concepts could support a more integrated research community.

There were multiple references to the value of working within collegial and supportive research contexts, but participants also highlighted that levels of genuine collegiality vary around the University.

Comments highlighted a number of structural barriers to collaboration and interdisciplinarity, some within the remit of the University, but others due to external structures and systems.

Participants identified that a positive research culture requires a breadth of ways of working, from lone scholarship to interdisciplinary collaboration.

2.2 Career Development and Career Structure in Academia

The most striking result in this section was that most participants strongly agreed that temporary contracts cause insecurity for researchers and might result in losing excellent and talented researchers due to the almost constant pressures of working to secure the next contract. Responses revealed that there was rather low awareness of training and mentoring opportunities. Qualitative data suggested ways that culture in this area could be improved at a local level.

Figure 3: Career Develpment and Career Structure in Academia (N=456)

- ■ Temporary contracts cause insecurity for researchers
- ■ Training by the university is appropriate for career development
- ■ Discussed career progression with manager or mentor

Quantitative Analysis

Figure 3 summarises key results for this section. The highest score response to all the questions was on an item about temporary contracts and how they can cause insecurity, putting some researchers off a career in academia. Most participants strongly agreed with this statement (65%). Another notable finding was that there was a divide between participants on whether the University offers appropriate training opportunities for career development. On this item, 29% answered undecided (neither agree nor disagree) whereas 28% agreed with this statement. Around 25% of participants appeared not to have engaged with discussions on career development.

Qualitative Findings

The survey uncovered internal and external issues around career development. The findings from this survey align with findings from the Wellcome Trust, suggesting higher levels of dissatisfaction with research culture at the institutional or wider level than at the team or individual level. Some respondents saw research culture as a wide-scale problem and thought that individuals have little agency in relation to the problem (Lauchlan, 2019).

However, while the Wellcome Trust survey suggested that research culture problems should be addressed from a sector wide 'top-down' approach, our qualitative data show how respondents within the University of St Andrews may be advocating multi-level (local, institutional, and sector wide) approaches to improve research culture.

Concerns at a local level within the University included how different schools and units approach the balance between research and other teaching and administrative tasks:

> *"Make research part of the workload model. Currently in my department, those with teaching and research contracts are expected to do the same amount of teaching as those with 'education focused' contracts. It's completely inappropriate, but I am told that it would be inhumane to expect education-focused people to do anymore teaching. How is it humane to expect R&T people to do research on top of it then?"*
> **Male, Research-Teaching, SM**

The increasing teaching and administrative demands in recent years were highlighted as one obstacle that has impacted on research activities and consequently promotion prospects:

> *"Research is essential for promotion, but it is not supported. The pressures of teaching and*
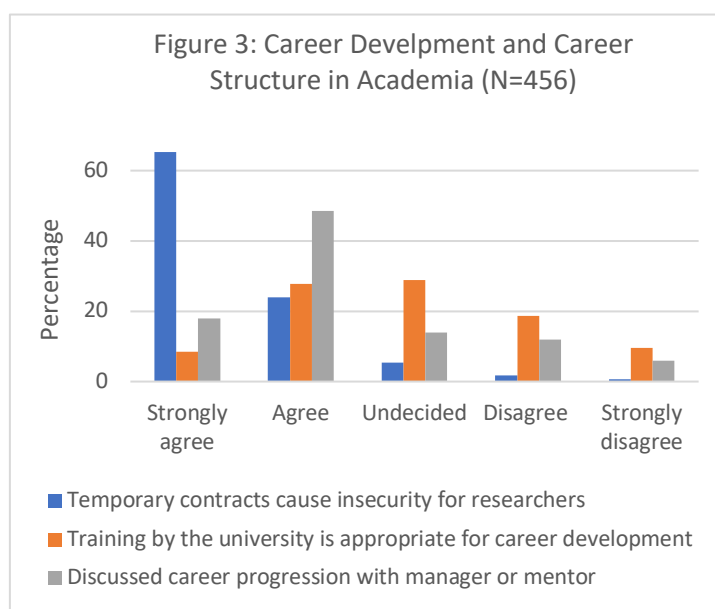
admin make it near-impossible to find time for research even to the most committed and quickest researchers."
Male, Research-Teaching, AD

Several comments were made that promotion structures and processes lack clarity, resulting in variations in interpretations between schools:

"Vague criteria and conflicting advice regarding promotion make career progression targets difficult to establish."
Female, Research-Teaching, AD

There were also suggestions that promotion and progression structures do not reflect the values and beliefs expressed in the University visions and strategies:

"*Provide parity of esteem for promotions across job families. Why should research staff as individuals be promoted, whereas those in other job families have to get their roles regraded, rather than recognising the strengths of the individuals in those roles? Provide alternate routes to promotion that don't require an academic background."*
Female, Research Student, AD

There was recognition of the benefits of flexible working policies and attempts by the University to address issues relating to fixed terms contracts and instability of employment:

"Flexible and part-time work is very easy to negotiate, which is crucial for me and many others in my department who have caring responsibilities or live further away from campus. The policy of giving priority to researchers with fixed term contracts ending soon to be re-hired within the university is an excellent one."
Female, Asian, MS.

"I worked at St Andrews for about 5 years before I was made permanent. It was very wasteful of my skills, because I had to put my energies into trying to find work all the time. Once I was made permanent, I 'blossomed', and developed a great post-graduate programme- the most successful in my department, and also was able to raise research funding. It made a complete difference."
Female, White, MS

In common with findings from other research culture surveys, respondents highlighted that external pressures drive excessive competition, but also acknowledged that the University seeks to resist these pressures:

"We don't have the same pressures of targets for funding and publication that staff in other universities face. Quality trumps quantity"
Male, Researcher, AD

Key points emerging from this theme:
Participants across all demographics agreed that temporary contracts impede career development.

Participants from all disciplines commented on the negative impact of increased teaching and administrative demands on research capacity.

Comments relating to promotion criteria were mainly negative. This finding suggests a lack of awareness of significant recent change in promotion criteria and procedures, or a lack of perceived success of the changes.

Only around 40% of respondents showed awareness of local training and mentoring opportunities, suggesting room for improvement in communication.

Issues highlighted above as impacting on career development and academic structures were also identified as potentially impacting on equality, diversity and inclusion across the University. This is discussed further in section 2.3. Concerns on the impact of the pandemic for career and promotion prospects are highlighted in section 3.6.

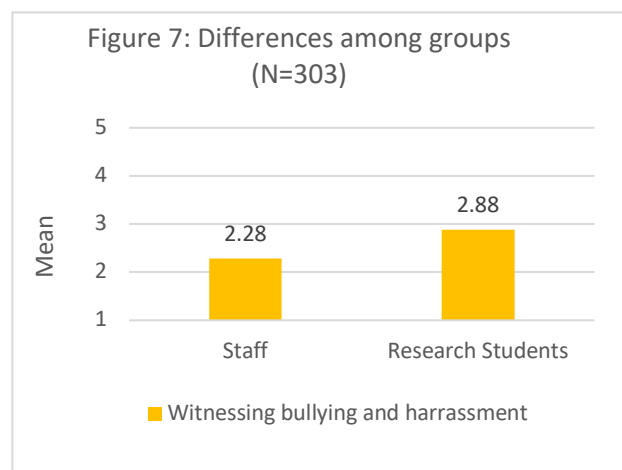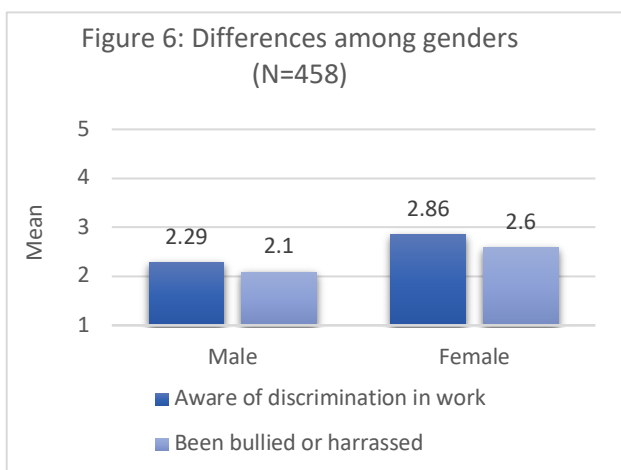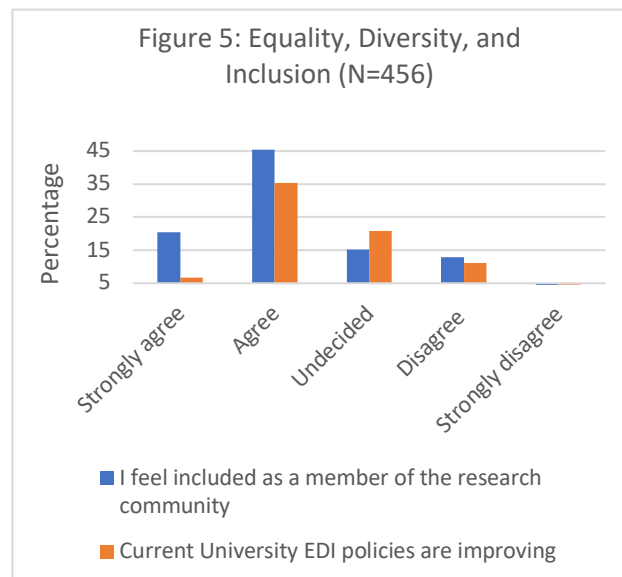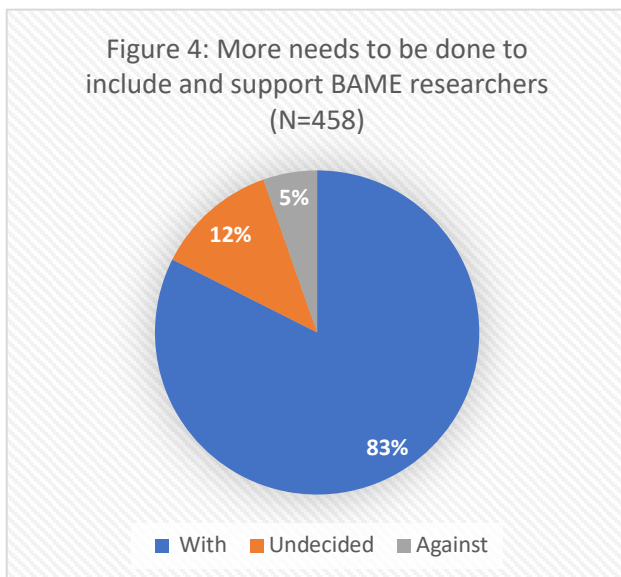## 2.3 Equality, Diversity and Inclusion (EDI)

There is a clear message that there has been progress in relation to some aspects of EDI, but the quantitative results suggest that most respondents felt that more needs to be done locally to provide support in this area. In agreement with other surveys, bullying and harassment were identified as an area of concern by many participants.

Quantitative Analysis

There were positive aspects of the data (Figure 5). In particular, most respondents agreed 'that they felt included as part of the community (45% 'agree'). Further, many participants agreed that current University policies are improving equality, diversity, and inclusion (35%). It was suggested that more needed to be done, however, to include and support BAME groups. 83% wanted greater support and inclusion of BAME researchers' (see Figure 4).[5]

Bullying and harassment was one of the dominant issues that emerged from this theme, with close to one third of respondents reporting witnessing or experiencing bullying or harassment. We found that different groups experienced bullying and harassment to different extents. Women reported being bullied and harassed more than men in addition to being more aware of discrimination at work (Figure 6). For these questions, a higher mean score indicates greater awareness of discrimination (dark blue), or of being bullied or harassed oneself (light blue). Analysis also revealed that research students witnessed bullying and harassment more often than staff members (Figure 7: higher mean score indicates witnessing bullying and harassment more frequently).

---

[5] We coded the 5-point scale responses as follows: the strongly agree and agree responses as (with), neither agree nor disagree response was labelled (undecided), and the disagree and strongly disagree options were labelled against.

Figure 4: More needs to be done to include and support BAME researchers (N=458)

83%
12%
5%

■ With ■ Undecided ■ Against

Figure 5: Equality, Diversity, and Inclusion (N=456)

Percentage

■ I feel included as a member of the research community
■ Current University EDI policies are improving

Figure 6: Differences among genders (N=458)

Mean

Male: 2.29, 2.1
Female: 2.86, 2.6

■ Aware of discrimination in work
■ Been bullied or harrassed

Figure 7: Differences among groups (N=303)

Mean

Staff: 2.28
Research Students: 2.88

■ Witnessing bullying and harrassment

Qualitative Findings

The largest number of individual open-ended comments within the EDI theme related to bullying and harassment (38/198). Other recently conducted surveys and reports also highlight this as one of the major issues in current research cultures within and beyond academia (Bleasdale, 2020; Equality and Human Rights Commission, 2019). Comments in our survey were, however, both positive and negative:

"I have been undertaking research at St Andrews for about a decade. I have NEVER a encountered any sort of bullying or harassment and I have not witnessed it either."
Male, White, AD

"I have experienced bullying by external collaborators, not from anyone within the University."
Female, Asian, SM

There was an expression of a lack of confidence in the University's commitment to resolving issues of bullying and harassment, with references to policies and processes not addressing issues effectively:

> *"The university claims to have a zero tolerance policy on bullying and harassment. But the "rights" of perpetrators are protected more than the rights of victims. Processes that give perpetrators second chances and a pathway to "reform" themselves also undermine victim wellbeing and the safety of the community."*
> **Male, White, 30-39, SM**

There was some suggestion that a lack of trust in the system is contributing to an under-reporting of incidents of bullying, particularly among people with protected characteristics:

> *"It is all well and good to have policies, but ultimately one way to judge if things are improving is to assess whether people feel confident to call out discrimination without fear of back-firing. Am I aware of anti-harassment policies? Yes. Do I know how to find the policies? Yes. Will I report harassment/bullying through these policies if needed? No."*
> **Female, Research, SM**

The unintended consequences of some University policies were also highlighted:

> *"As a BAME scholar, I have concerns that there is too much emphasis on EDI. As someone whose research is in the traditional humanities (which some may associate 'whiteness'), I often (1) feel pressured to do research that is somehow 'specific to' BAME issues, as if as a BAME scholar I am not allowed to conduct traditional 'white' research; (2) in light of all the BAME promotions, I am given the impression that I am hired as a token person.*
> *In my opinion, radical EDI measures can perhaps challenge meritocracy."*
> **Male, AD**

Other respondents acknowledged the work going on within the University to address EDI issues and suggested that there are structural problems to address that are beyond the control of the University:

> *"The conditions which cause e.g. sex discrimination have underlying structural causes (e.g. short fixed term contracts) which cannot be addressed with institutional policy."*
> **Male, White, Research-Teaching, AD**

> *"The discrimination against researchers in my working environment that I have indicated is structural and external in nature, rather than individual and internal."*
> **Male, Mixed or Multiple Ethnicity, Professional Services**

Some of the actions taken by the University to support diversity & inclusion are felt to be inadequate or counterproductive:

> *"I am an EDI officer for my School and so have first-hand knowledge that colleagues with protected characteristics do not feel adequately supported by current policies. A policy is of little use if it is not reflected in the individual practices of Departments, Schools, and non-academic units."*
> **Male, Research, SM**

Some comments highlighted improvements in EDI at the University of St Andrews over time:

> "*My own personal experience is that people are generally included and the local experience is*

there is a great effort to improve diversity from a strategic level downwards."
Male, Research-Teaching, SM

Other comments highlighted that some practices within the University allow inequities to persist:

"There is clear evidence of the university not taking this seriously (networks and institutes/programmes that are celebrated and touted as important and part of EDI work, which are then forgotten about, or the support is not followed through). Too often this kind of work relies on precarious scholars / PGRs who are not being properly paid or supported, because it is put on top of an ever increasing workload (and very much seen as being on top, not a fundamental way of working). There is a very disappointing record of the people at the heart of EDI work moving away through lack of support or redundancy."
Female, Research Student, AD

However, some respondents indicated they felt there was an unwarranted focus on some EDI issues:

"EDI simply encourages people to over-emphasize attributes like gender and skin colour which we should all be ignoring."
Female, Research-Teaching, AD

"Stop banging on about gender and ethnicity."
Other-Non-binary-Undisclosed gender, Research-Teaching, SM

We did not collect demographic data on disability in this survey, nor were there specific questions addressing it. A few individual comments did emerge, suggesting that disability is a largely hidden issue within the University. Some comments suggested that the University should invest more resources in addressing the needs of staff and students with disabilities:

"*There in progress in EDI. However, there is a lack of much recognition or assistance for research staff with disabilities, particularly hidden disabilities. There is also fear of disclosure."*
Female, Research -Teaching, SM

"Be more inclusive of researchers with disabilities. While BAME inclusion has become a fashionable topic lately and many institutions try to create opportunities for them, little is done for researchers with disabilities. The situation at St Andrews is especially poor."
Female, Other, AD

"The university lacks a disability policy, hindering provision of reasonable adjustments for those who require them."
Female, Research Student, SM

> **Key points emerging from this theme:**
> A high proportion of participants reported feeling included in the community, although over 80% felt that more should be done to support and include BAME researchers.
>
> As reported in other research surveys, bullying and harassment was reported to be present within research contexts across the University, with close to 1/3 of people either witnessing or experiencing these problems.
>
> There were small but significant differences in the experiences of different genders and students/staff in reporting experiencing or witnessing bullying and harassment.
>
> There was suggestion of a lack of trust in the University systems that may be contributing to an under-reporting of incidents of bullying and harassment.
>
> There were a number of comments suggesting that disability is an area where policy and practice could be improved.

2.4. Research Integrity, Openness and Fairness

Concerns around maintaining and improving research integrity is a consistent theme in most research culture studies (Casci & Padgett, 2019; Macleod, M. et al., 2021; Wellcome Trust, 2020) and as part of wider discussions on the research context in recent times (Frias-Navarro, 2020; Harvey, 2020; Metcalfe et al., 2020; Orhan, 2020; UKRI, 2016). Our results were more promising. Survey results suggest a generally positive response to the upholding of research integrity in the University, through both policy and practice. There was a more mixed response to how well the University supports Open Research and fairness.

Figure 8: Research Integrity, Openness, and Fairness (N=459)

Legend:
- Most of the research in the university is carried out with honesty
- I do not feel that the university takes research integrity seriously
- Aware of research conducted below integrity standards

Quantitative Analysis

Figure 8 summarises some key points from this theme. The most common response to the item asking about carrying out research with honesty and transparency at the University was 'agree' (48%). Further, many participants disagreed with the statement suggesting the University was not taking research integrity seriously (39%). A similar and related finding was that many participants disagreed with the item that asked them about whether they were aware of research that was not upholding the highest standards of integrity (35%). Overall, these responses suggest that support for the effectiveness of current systems and practices is strong.
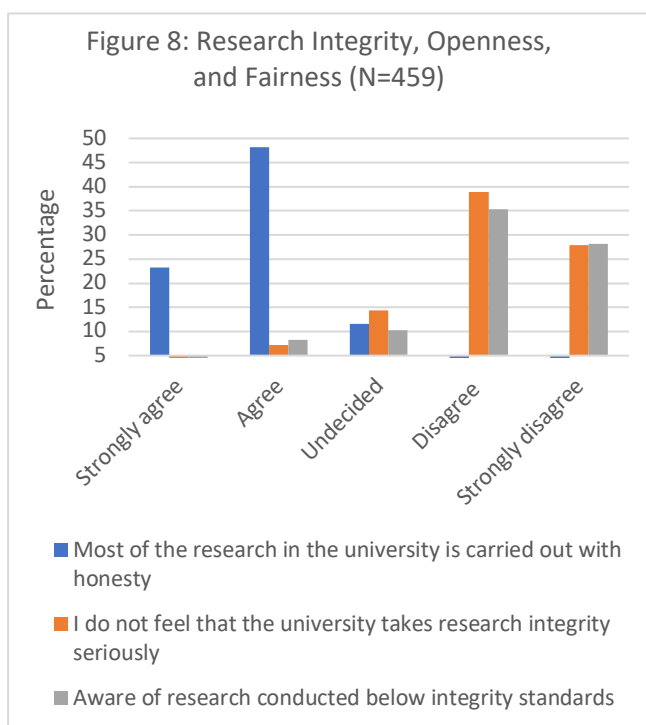
Qualitative Findings

The majority of comments from the St Andrews survey indicated that participants from across different disciplines and job families felt the University's response to issues of integrity is robust and appropriate:

> *"I know of cases where research integrity investigations occurred, and complaints were upheld. Thus, while I know of researcher that did not uphold the highest standards, the system to address this held."*
> **Female, Research-Teaching, SM**

Some respondents felt there were additional steps the University could consider in relation to some aspects of research integrity:

> *"I have some mixed experience. I have had a serious issue in dealing with collaborators and did not receive support from my line manager who suggested to simply let it go. I however received some support from higher up. I only felt confident that I will be able to stand my case because I would be able to count on the support of my sponsor. Having been on a fixed-term contract at that time, I was not confident about sufficient support from the University."*
> **Female, Research-Teaching, SM**

Other respondents suggested the University's approach to research integrity is excessive and too restrictive:

> *"I think a risk management approach is needed so that overly rigid approval systems to not deter/hinder research in sensitive areas or discourage interaction with outside organisations and individuals."*
> **Female, Research Student, SM**

Some respondents questioned the University's motivation for focusing on research integrity:

> *"Even though I am aware of how important integrity is for staff members at my School, my exchanges with ethics committees and associated bodies within the University have made me feel that sometimes there are more concerns about University liabilities than actual research integrity, and that therefore our research is more constrained by attempts to legally protect the University than by ethics considerations."*
> **Female, Research-Teaching, AD**

> *"I think the university cares about how well our research will fit into REF. I think the university cares about good PR. I think the university cares about research integrity to the extent that it facilitates those two things, not as an end in itself."*
> **Female, Research, AD**

Some respondents shared different experiences of research misconduct within the University, suggesting different practices within different contexts:

> *"I am not aware of any current issues with research integrity"*
> **Male, Research, SM**

> *"I have encountered some poor practice but I have also been happy to see committees push back where things have been poor."*
> **Female, Research-teaching, AD**

Nationally, the development of Open Research has been generally recognised as a positive feature

within research culture (UKRI, 2016). Some survey respondents highlighted some of the difficulties relating to the open research agenda:

> *"Open research is too often equated to 'compliance' rather than about undertaking research in a way that is transparent, supports reproducibility, increases visibility, enables reuse. Open access is too often equated to business models rather than a culture of fair, equitable and sustainable access to all forms of scholarly communication (both as readers and authors/ creators/ contributors)."*
> **Female, Professional Services**

There were different impressions within the data of how the University is embracing Open Research. Some felt that the University has been proactive in promoting different forms of Open Research:

> *"The folks supporting open access etc are very helpful and do a fantastic job. This is now really easy. This is a really good achievement and vastly superior to my experience in US institutions"*
> **Male, Research Student, SM**

There were comments suggesting the University could be doing more to promote Open Access research:

> *"I am aware of open access research more because of my own initiative rather than a clear message being encouraged by senior management."*
> **Female, Research, SM**

> *"Much more support (including financial) for open access work is needed. The University cannot claim to value it while putting so little resources behind it."*
> **Female, Professional Services**

Some respondents expressed confidence, and some concerns, around processes of research evaluation across the academic system generally, including issues surrounding the REF. These included: the pressure to balance publication quality and quantity; issues around authorship and co-authorship that impact on decisions to join research collaborations; and the fairness of peer review as a form of evaluation:

> *"Internally there are good mechanisms to ensure PhD progressions etc. I think this is quite robust."*
> **Male, Research-Teaching, AD**

> *"I agree that processes exist to ensure fair evaluation, but I also know that some processes can be circumvented."*
> **Female, Research Student, AD**

> *"It is not to say that individuals in the school believe quantity is more important than quality. It is the quotas imposed on us by REF etc."*
> **Other-non-binary-undisclosed gender*, Research Student, AD**

There are different perceptions of the value of peer-review as an evaluation approach:

> *"Peer review is discriminatory against underrepresented groups - not sure entirely what can be done about this"*
> **Male, Research Student, SM**

"Peer review of papers seems to work well in my field - open and fair, and usually kind and constructive."
Female, Research-Teaching, SM

Evaluation of grant applications was one area where respondents felt the University of St Andrews and the wider research context could potentially work to increase fairness and transparency:

"There's an element of /luck/subjectivity to assessment of grant applications both outside and inside the university. Fair assessment of internal grant applications is perhaps something we could work on."
Female, Research-Teaching, SM

Further concerns around transparency and fairness were linked to the authorship of papers:

"This is a tricky area - for multi author papers in sciences that are completed over many years (where initial ideas and results actually included may be provided by different people) means any sort of "order" for contribution and authorship is very difficult to have. In my particular discipline there are a core/group of famous/successful people that definitely count/value numbers as well as quality."
Female, Research-Teaching, SM

Key points emerging from this theme:

Comments suggested participants felt the University is approaching matters of research integrity appropriately.

Pressures from the external research context (e.g., REF; paper and grant review) were identified as contributing to potential problems with research evaluation.

Fair recognition of contributions to research and authorship and fair allocation of grant funding were all highlighted as significant concerns.

Participants felt the University could develop Open Research better with more resource.

2.5. Work-Life Balance

Participants in the sample revealed mixed feelings about their overall work-life balance. Although, many reported a high degree of happiness and satisfaction around their research-related work, there was a sizeable minority who disagreed. Again, a sizeable minority felt isolated and lonely because of the pressures of research. Qualitative responses suggested that a major contributor to problems with work-life balance came from increased teaching demands reducing opportunity for research. Some respondents also felt that there was (possibly unspoken) pressure to work very long hours.

Quantitative Analysis

There were many positive responses to items on work-life balance and on isolation and loneliness (Figure 9). Many participants were happy with their work-life balance and the hours they work each week (38%, blue bars). Also, the most common response to the item asking if demanding research duties left researchers isolated and lonely was 'disagree' (33%, orange bars). But note that responses were spread broadly across the range of agree-disagree, demonstrating that views were varied across participants and that many people were not satisfied with this area of the research culture.

Figure 9: Work-life Balance (N=456)
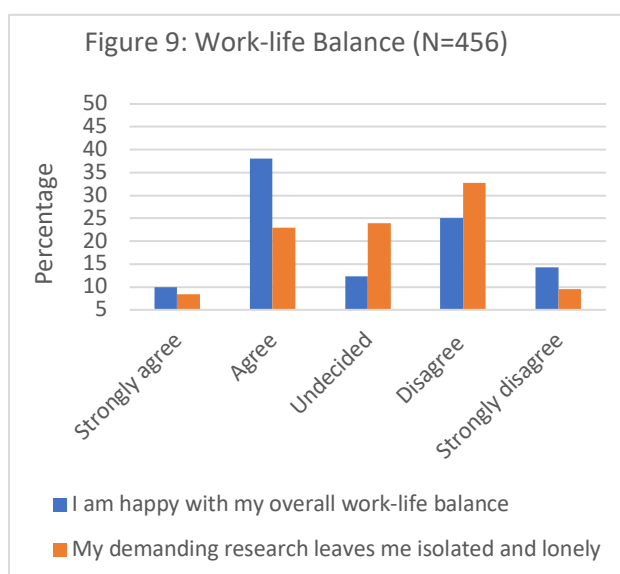
Qualitative Findings

The problems around drawing satisfaction from research and achieving an acceptable work-life balance within academia have been widely discussed as having been exacerbated in recent years due to sector-wide changes across the academic landscape (Bleasdale, 2020; Gottlieb et al., 2021; Lauchlan, 2019; Orhan, 2020).

Within St Andrews, participants appeared to find the increasing teaching demands the most disruptive to achieving a balance between the demands of a productive working life, including conducting research, and the demands of family and wider responsibilities:

> *"Work-life balance is extremely difficult to maintain under the constrains of our current workloads and we are constantly having to sacrifice research time to the demands of administration and teaching. So, the only time we seem to have to devote to our research is the time we should be taking away from work (i.e. our 'life' time). This is the fault of the University."*
> **Female, Research-Teaching, SM**

There are concerns around the expectations to work long hours as part of the established research culture across the University:

> *"Much of the university work stupid hours, people never stop working, I receive emails all times of the night and even over the weekend. It makes it hard to switch off. I have had to put a block on my emails so I don't get notifications except between 9-5 mon-fri. If you work 9-5 it feels like you are not working hard enough as some people work from the moment they wake up until when they go to bed. Too much is expected from research students, lecturers and the heads of the university.*
> **Male, Researcher, SM**

> *"Until it becomes a culturally negative thing to stay up late/work the weekend/push through to get a paper/grant/etc out, those who are willing and able to do these things will get more research done and more kudos. As it is, it requires more than standard working hours (37.5 hours a week, according to UKRI!!!) just to keep level."*
> **Female, Research-Teaching, SM**

The precarity of employment for people on short term contracts has added additional pressure to work long hours:

> *"I feel perpetual pressure to work evenings and weekends to secure another fixed term extension. I regularly work 60+ hours weeks"*
> **Female, Researcher, SM**

There were calls for the University to adopt a different approach, prioritising wellbeing of staff and research students:

> *"Recognise the vulnerability of academic staff. Many people are fuelled by passion for research and passion for teaching and the university should not exploit that. Put people before profit. Look after staff and postgraduate students properly."*
> **Female, Researcher, SM**

The issues highlighted above, and the additional challenges brought by Covid-19, discussed in Section 3.6 below, have negatively impacted on research satisfaction:

> *"If I could spend more time on research, I would have more job satisfaction, better mental health, and a better work life balance. However due to excessive workload for other aspects of the job (teaching/admin), the research takes a back seat, causing stress and the feeling of a stagnating career. This was particularly true due to COVID, where I had no reduction in my workload but had to care for a toddler 50% of the time for almost 6 months of the last year. The thing that suffered was my research (and thus career prospects) and my mental health and work life balance."*
> **Female, Research-teaching, SM**

On a more positive note, there were comments relating to the enduring satisfaction and passion that research ignites for individuals across the University despite the difficulties:

> *"The last year has been a massive challenge on so many fronts, I love my research, I have not been able to carry out as much as I want/ need or in the ways I wanted to, and since no one is talking about lowering targets I am just going to be behind for the next 5 years with little reward. But I still love the research."*
> **Female, Research-teaching, AD**

> *"I love my research and it gives me the greatest satisfaction. The issue, at least for me, is that the university creates a working environment that hinders, rather than supports, the conduct of research due to constantly increasing demands on my time and energy".*
> **Male, Research student, SM**

> Key points emerging from this theme:
>
> The increasing demands of teaching and administration, and an established culture of long-hours working across the University, were identified as contributing to a negative research culture.
>
> Many participants shared that they found conducting research life-affirming and fulfilling but felt that the University, and the wider research context, took advantage of individuals and their passion for their work, and that this had a negative impact on health, career opportunities and long-term research outcomes.
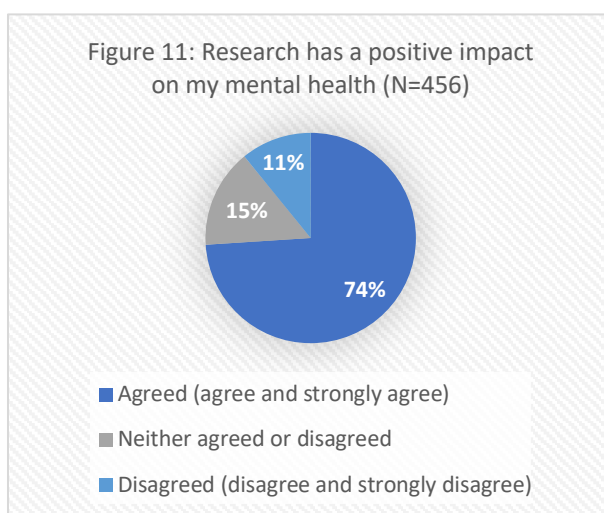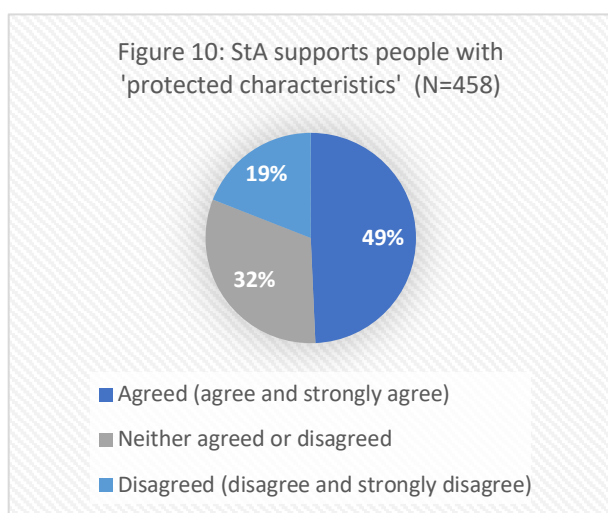>
> Whilst many expressed satisfaction with their work-life balance, others found it very difficult (although expected) to balance research with other commitments, especially teaching.

2.6 Wellbeing and Mental Health

Research itself was felt by most to have a positive impact on mental health, although most participants felt that the University could do more to support mental health. Around half of participants felt that the University supports those with protected characteristics to succeed. There is some acknowledgement that sector-wide pressures have an impact on mental health, but respondents suggested that the University could do more to discourage over-work. The pandemic was the subject most commented on in relation to mental health, and although most comments were negative, there were some positive impacts reported.

Quantitative Analysis

There is still ground to cover in bringing the community on board with the University's support structures. Close to half of respondents agreed that the University of St Andrews supported people with 'protected characteristics' to succeed in academia (49%), although 32% selected undecided and 19% disagreed (Figure 10).

Figure 10: StA supports people with 'protected characteristics' (N=458)

- 49% Agreed (agree and strongly agree)
- 32% Neither agreed or disagreed
- 19% Disagreed (disagree and strongly disagree)

Figure 11: Research has a positive impact on my mental health (N=456)

- 74% Agreed (agree and strongly agree)
- 15% Neither agreed or disagreed
- 11% Disagreed (disagree and strongly disagree)

Research in its own right was suggested to have positive benefits. The opportunity to engage in research was thought to increase wellbeing and improve mental health. A total of 74% of

respondents stated that the opportunity to conduct research has had a positive impact on their mental health, whereas 15% were undecided, and 11% disagreed (Figure 11).

In contrast, there were issues where mental health problems already exist: 64% of respondents agreed that the University could do more to support individuals with mental health problems, whereas 21% were undecided, and 9% disagreed (see Figure 12).

Figure 12: The University could do more to support people with mental health issues (N=458)

- 9%
- 21%
- 64%

Legend:
- Agreed (agree and strongly agree)
- Neither agreed or disagreed
- Disagreed (disagree and strongly disagree)

Qualitative Findings

Some respondents reported improvements in mental health over the course of the lockdown:

> "My mental health impacts my research quality with or without the impact of COVID-19. Once I had established a routine which worked for me to be able to manage my anxiety, I was actually able to produce higher quality of work without distractions."
> **Other-Non-binary-Undisclosed Gender, Research Student, AD**

> "Working at home during the pandemic has lowered the impact of the research environment on my mental health. I feel that I can do work and just get on with it without having to be seen to be doing it in the right place at the right time."
> **Female, Professional Services, SM**

Most respondents reported that the Covid-19 lockdown had a negative impact on mental health:

> "During Covid it has not been possible to do any research due to increased demands related to teaching, admin, and pastoral support, and due to the lack of library provision. The fact that there has been no adequate access to physical library resources for 12 months has had a deleterious effect on Arts & Humanities research. All of this is destabilising in terms of mental health since it is a constant worry and uncertainty, causes frustration, and creates anxiety about the future (inability to research will lead to diminished publications and therefore may impact on career prospects). The failure of the university to take a lead on ensuring Arts & Humanities research can continue is also corrosive on wellbeing because from every side A&H researchers hear their research being labelled as 'non-essential'. This is creating a 2-tier system within our institution."
> **Male, Research-Teaching, AD**

There were references to the wider pressures within academia that challenge mental health:

> "The single biggest factor detrimental to my wellbeing is lack of job security. I am currently on my 4th fixed term contract."
> **Female, Research-Teaching, SM**

> "There is a constant pressure to do more (both internal to the university and external) and this can be stressful. As an example, we are currently teaching more (and re-writing courses) yet also are told by XXX we have KPIs to increase grant income by 25%. There are not enough hours in the week to do the ever increasing number of jobs that come our way."
> **Female, Research-Teaching, AD**
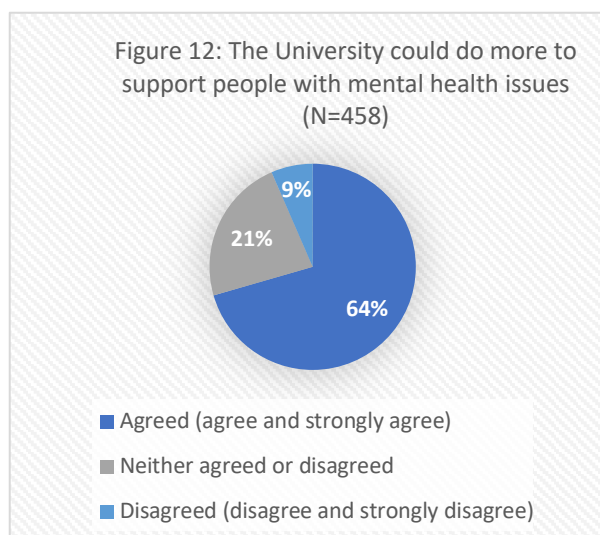
There was difference of opinion about how the University should approach support for staff mental health. Some felt the University could invest more resources in mental health and wellbeing for staff:

> *"The university should do more to support researchers with mental health or well-being issues - by supporting staff in general and funding staff rather than for example large salaries for management and new buildings etc."*
> **Male, Research-Teaching, SM**

> *"I feel like the Schools should do more about mental health, not just the University. The University level is great, but it lets Schools and Supervisors off the hook. It needs to take place more local to where staff and students are working."*
> **Female, Research-Teaching, AD**

Other respondents felt St Andrews offered good support for mental health issues:

> *"I feel the University already does so much to support our mental health. No need for it to do more."*
> **Female, Education-Focused, SM**

> *"It is always possible to do more to support researchers with well-being issues - but the University and my Department do a pretty good job."*
> **Male, Research-Teaching, SM**

Others felt the University of St Andrews has a responsibility to address some of the structural problems relating to long working hours culture and the use of short-term contracts that are known to contribute to mental health issues:

> *"Well-being should not be pushed back onto individuals, without acknowledgement that the institution has a responsibility to protect researchers from being overworked."*
> **Male, Research-Teaching, SM**

> *"Mental health issues are linked to insecurity attached to short contract, challenges in career progression, increasing workload, lack of support, uncertainty for the future, e.g. pensions. Mindfulness sessions are not the answer. If we want to reduce mental health we need to provide more stable careers and reduce workload."*
> **Female, Researcher, SM**

There were some suggestions that events from the recent past have resulted in mistrust by staff in relation to the University's concerns around wellbeing and mental health:

> *"Placing so much emphasis on REF and its importance while at the same time, creating such an administrative burden that makes it difficult to do any research is a source of much anxiety and stress for me. I frequently consider leaving academia to pursue a career where I am evaluated principally for the activities I spend most of my time doing, whereas I currently feel that my value to the employer and sense of self-worth is inherently tied to research, which I must currently squeeze in to the gaps around admin and teaching, or to weekends and evenings causing my family life to suffer."*
> **Male, Research-Teaching, AD**

"I started on a casual contract at St Andrews and this created a cascading problem where I needed to teach and do more admin to make myself seem valuable enough to hire permanently, but it meant that my research often got pushed aside. Now that I am permanent, this has happened again in the context of COVID. My line manager does not ever support my requests to rebalance my teaching load so I can engage in my scholarship, and I know of multiple colleagues who had research leave requests denied because of budget and/or teaching strains. The effect this has on my mental health is devastating. It has shaken my belief in myself as a researcher, and it takes away a major joy in my life. I am very fearful that the Uni will follow in the steps of other UK institutions that are becoming even more metrics and grant-income focused."
Female, Research-Teaching, AD

Key points emerging from this theme:

Mental health and wellbeing are a significant issue across all disciplines and job families within the University. Most participants agreed that the University could do more to support people with mental health issues.

The research endeavour itself was thought by the majority to be positive for mental health, although most individual comments were less positive.

Participants identified external structural aspects of the research culture contributed to mental health issues, and felt that these could be addressed via advocacy.

The Covid-19 pandemic has had a significant impact on the mental health of staff and students; for a few this has been surprisingly positive.


2.7. Impacts of Covid-19

Both the quantitative and qualitative analysis (a total of 434 comments from AD and SM) revealed that Covid-19 had a major negative impact on University life, which was expected. However, digging deeper into the analysis suggested that the impact of the pandemic was somewhat greater on AD than SM (Figure 13, here a higher mean score indicates a more negative impact).

Figure 13: Covid-19: Differences among disciplines (N=434)

2.7.1. Negative Impact of Covid-19

There was a strong trend in the comments on the Covid-19 pandemic towards negative statements (144/313 references), referring to the loss of opportunities to conduct research:

> *"The pandemic has destroyed much of the culture. Researchers are working shifts, socially distanced. Seminar series are cancelled, or moved online. Informal conversations and chance discussions have almost ceased entirely. PIs are tired, stressed and overwhelmed with teaching and admin. Students/PDRAs are lonely, far from home, many going back to spartan accommodation with no prospect of in-person socialising. Overall this has been a hugely draining experience. As with many other aspects of life, it feels like we are going through the*
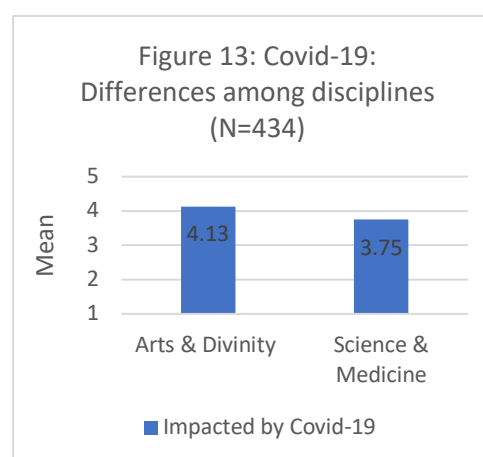
motions, simply to exist (or keep research going) as we await the promised land on the other side. There has been no effective or in-depth consideration given to how we might continue working in this new way effectively in the long term."
Male, Research-Teaching, SM

Many of the issues discussed under previous themes were reported to have been exacerbated by the Covid-19 pandemic:

"Impact of COVID-19 has been massive in two ways. Caring responsibilities with small children and push via School to prioritize teaching/support students. It has been a double-whammy against my research."
Female, Research-Teaching, SM

There was a recognition that the impacts of the pandemic were experienced differently by different individuals and groups, particularly those with caring responsibilities:

"The deeply unequal impacts of COVID and COVID restrictions have significant short- and long-term EDI implications. I hope that the University will put in place policies to attempt to mitigate these impacts, but am not aware of this happening to date, other than the SARRF funding round (the benefit of which was, for some researchers, then significantly decreased by the second round of school and nursery closures in Scotland). COVID restrictions mean that some researchers (for example, those who have had full-time caring responsibilities during school/nursery closures, which research has shown have disproportionately impacted women's ability to work) have now lost more than half a year of working time, while other researchers have been less seriously impacted. Without significant support (including funding for research time and allowances in e.g. the promotions process) these unequal impacts on researchers will have permanent consequences."
Female, Research-Teaching

Several respondents found the support and engagement from the University during the pandemic helpful, while others felt the University could have done more to mitigate problems:

"The University has been awful on work life balance since the beginning of Covid the additional workloads are unbearable. It has completely transformed my attitude to my employer, I feel completely let down and angry at the clear disregard the university has shown its staff, while still expecting us to be grateful we have not been made redundant."
Female, Professional Services

Many respondents felt that research has been disproportionally impacted as the University focused on delivering teaching:

"We have to spend so much time on preparing and delivering online teaching that it is hard to find time to do the normal amount of research."
Male, Research-Teaching, AD

There were concerns around the long-term impact on staff of the reduced access to research resources and loss of study leave on future research endeavours:

"Researchers whose jobs are solely in research, often short-term, are put under huge pressure to deliver, even where their research has been stopped in it's tracks (e.g. travel to field sites libraries, research with human participants). Pressures to develop new ways of

> *teaching and support of students has taken huge amounts of time away from research. Expectations in these areas must be eased so that research time can be won back."*
> **Male, Researcher, SM**

Some respondents from AD felt their disciplines had been particularly disadvantaged by the Covid-19 restrictions:

> *"Arts and Humanities research has been impeded and downgraded. This is true at all levels, including PGR and PGT, and even the way that we teach our UG students basic research techniques. The central resource for our research is the Library, and the fact that it has been closed with absolutely no access for browsing the shelves for 12 months now says a lot about how our research is valued. The central most highly regarded research output in the Humanities is the research monograph. This type of book is very unlikely to be in e-book format, and copyright means a whole book cannot be scanned or digitised; these factors problematise access to key research findings in the A&H. This is something that has not been properly acknowledged or addressed; it cannot be solved by emergency library services such as scan & deliver".*
> **Non-binary-Undisclosed Gender, Research-Teaching, AD**

The impact of the University decision to cancel research leave was another significant concern that spanned all disciplines:

> *"Cancelling research leave has been very damaging."*
> **Male, Research-Teaching, AD**

> *"I find the university's handling of research leave during the pandemic poor. Decisions were left to individual Schools, and in my School these decisions were highly unfair and inconsistent."*
> **Male, Research-Teaching, SM**

Participants from all disciplines highlighted the pressure they felt to deliver against prior expectations:

> *"A huge amount of guilt has occurred during the pandemic. The push to complete projects has not correlated with the ability to do so and I feel expectations of what is actually manageable has not been realistic."*
> **Male, Researcher, AD**

Additional stressors reported by participants included concerns for their health or for the health of others, loss of social contact generally, and the pressure of operating in a virtual context:

> *"From what I saw, it has been quite difficult for most of us to keep our research going specially with so much to deal with the stress of a fatal disease and the fear for our loved ones. Not been able to have contact with fellow researchers made me feel even more isolated in a moment of already so much isolation."*
> **Male, Research-Teaching, AD**

2.7.2 Positive Aspects Emerging from Covid-19

There were also positive comments relating to changes in behaviours and practices that have emerged from the Covid-19 crisis (48/313 references). The loss of the commute and the need to

actively create separation between home and work life were highlighted as partially positive results of working through Covid-19:

> *"I know I work too hard and too long. However, COVID-19 and working from home has had a positive effect in that I see my family more, despite me working even longer hours than before."*
> **Male, Research-Teaching, SM**

Some respondents found that the use of virtual technology has catalysed communication and collaboration:

> *"My impression is that the "together" feeling has been strengthened. I have seen much stress being added by university management at other institutions, while I have always felt relieved through communications from notably our Head of School, our Director of Teaching, and our Principal who in my opinion have done an outstanding job"*
> **Female, Research-teaching, SM**

> *"The research community in our school flourished as a result of lockdown. I have had more research type discussions with colleagues than ever before. We came up with new ways to deliver research on the ground working remotely with partners in other countries - all great - but it came at a cost."*
> **Female, Professional Services,**

There were indications that some of the changes to work patterns that have emerged or been expedited in response to Covid-19 should become part of routine businesses as usual (BAU):

> *"I hope that the university allows increased flexibility of working from home in the future, allowing managers the flexibility to accommodate the needs and circumstances of their own teams. There is no reason I would need my own team to be physically present in the office for more than half a day per week, for example".*
> **Male, Professional Services, AD**

The widespread adoption of on-line forums has presented opportunities to engage with a wider sphere of scholars, nationally and internationally, while reducing the financial and environmental costs:

> *"It has led to increased opportunities to have speakers who otherwise might not have been able to come to St Andrews and host developmental workshops with scholars in other continents; online conferences and vivas online have worked well and reduced related financial, work-life and environmental costs; led to new initiatives for presenting our own research in the School and having PhD students self-organise their own PhD-led sessions. Face-to-face interviewing has stopped but has been easily replaced with online interviews."*
> **Female, Education-Focused, SM**

There were several comments relating to how working remotely had necessitated different approaches and a switch to different priorities:

> *"I think that COVID-19 has given all researchers and PI's an increased sense of compassion, empathy and understanding."*
> **Male*, Research Student, AD**

> *"It's possible that research OUTPUT (papers, reports, grant applications etc) may have*

*increased as staff were able to work from home undisturbed by usual distractions whilst in the office***
Male, Research-Teaching, SM

Many respondents expressed a desire to develop areas that have emerged as a result of working through Covid-19 that enhanced the sense of community and would like to see the University of St Andrews invest resources that facilitate building social networks and resources as we move out of the Covid-19 era:

"It brought staff together in some ways that were really interesting and I hope stick around (e.g., more flexibility with vivas, setting up collaborations)."
Female, Research-Teaching, AD

"This has been a golden era of networking between schools. Before the pandemic hit, inter-school communication was very limited due to spatial constraints, and due to Skype for Business not being fit for purpose. 'Teams' has dramatically changed the networking landscape and I anticipate more interdisciplinary research will occur as a direct result."
Male, Research-Teaching, AD

"This is a unique opportunity to cherish and foster the values and behaviours we want to have and live by as individuals and as a community!"
Female, Researcher, AD

Key points emerging from this theme:

The Covid-19 pandemic has had a major negative influence on research. Participants reported multiple causes for this, including lack of contact with other researchers, lack of access to libraries and labs, caring responsibilities, lack of a suitable working environment, and pressures to invest time in acquiring new skills around virtual teaching and meetings. Participants also expressed concerns around job security and the long-term impact on funding.

Both quantitative and qualitative data point to some groups of researchers being more impacted than others by events related to the pandemic (e.g., women, younger researchers, researchers within AD disciplines).

A minority of respondents revealed some interesting potentially positive benefits of what we have learned during the Covid-19 crisis, particularly in relation to forming and maintaining relationships with colleagues.

Positive change around way of working including online working and more flexible working were identified by some respondents.

3.0 Conclusions and Next Steps

The high levels of engagement with the culture survey from across the University of St Andrews captured a rich profile of key features of research culture across different disciplines and contexts within the University and highlighted how different aspects of research culture impacted differently on the diverse community of scholars. The positive and negative aspects of the current research culture particularly highlighted by participants are summarised below. The research team has

secured follow-on funding for this research and the intention is to use these themes as the 'anchors' for the development of a proposed action plan to guide future research culture initiatives and policy change across the University of St Andrews. We also plan to publish academic papers on specific aspects of our results to contribute to the evidence base on Research Culture.

3.1 Notable Features of the University of St Andrews Research Culture

The research team analysed the data across all demographics and highlighted the responses that were found to be statistically significant across the different groups. Those differences that did emerge are graphed by theme above.

Most of the quantitative data showed similar patterns to other research culture surveys, an important point given that, unlike in other surveys, almost half of our participants were from AD.

 The following are notable features of our survey, grouped under 3 headings:

Responses indicating that research culture policies, processes, and practices should continue on their current trajectories

- The survey comments provided positive features of the University's research culture operating at the individual, interpersonal and organisational levels.
- There was quantitative evidence for awareness of many areas where the University has invested in policy improvement, although also some evidence of a lack of awareness of change (e.g. promotion criteria). The clearest positive example was that participants felt that both policy and practice around research integrity work well.
- Participants commented on good opportunities for personal development through courses and seminars provided internally and externally to the University.
- There were several references to a co-operative and friendly environment and supportive colleagues. People valued the opportunities for both formal and informal interactions with colleagues, being seen and cared for "*as a human being".*
- Some participants from AD disciplines recognised that an equal spread of teaching and research responsibilities across their departments, with Professors sharing all aspects of teaching commitments, was a positive feature of their research culture.
- The University's success in retaining highly skilled top-class academic researchers was also highlighted as contributing positively, proving a wealth of experience in both teaching and mentoring.
- The development of flexible working patterns and strategies, including holding meetings within core hours and sharing expectation statements of working hours and response times on emails, were seen as supporting a positive research culture. Also, the emphasis on research integrity training by both the University, and by individual Schools, was identified as positive, embedding the culture of research integrity. The annual review process for staff and PhD students was seem as potentially positive, but participants also provided suggestions on how these could be improved.
- The provision of regular research leave, and the support teams surrounding research efforts, were also recognised as important.
- Several participants appreciated the ability to access tools and infrastructure and the contributions made by the OA Office, the Library Team, and colleagues in School workshops and lab technicians were all seen as significant contributors to a positive research culture, along with the relatively flat hierarchical structure within the University that allowed prompt access to senior decision makers, rather than multiple levels of sign-off on proposals. Participants saw this as supporting high levels of autonomy within the research community.

- There were references to *"a diversity of excellence being valued"* and the feeling that people across the University want others to succeed in their research, with successes in competitive funding being shared and celebrated.

Responses indicating mixed opinions and experiences worthy of further exploration and consideration

- The Covid-19 pandemic appears to have had an unequal impact across disciplines and demographic groups within the University. Women and AD researchers appear to have been most significantly impacted by the pandemic.
- Positive benefits of the Covid-19 crisis emerged in the different approaches to forming and maintaining relationships with colleagues within the University, and beyond. These were seen as something beneficial to build on in future.
- Differences in how the terms 'collegiality', 'collaboration' and' interdisciplinarity are understood and applied across disciplines is impacting on the development of cross-discipline working.
- Participants felt the University could invest more resources in Open Research.
- Many felt the University and the wider research context took advantage of individuals and their passion for their research work and this had an impact on health, career opportunities and long-term research outcomes. The pressure to balance research with other commitments was also highlighted.

Responses indicating there is a need for specific attention

- There was some scepticism in relation to how impactful policy change was in improving research culture. The clearest negative example was in bullying and harassment: although there was wide awareness of policy, there was scepticism that current practice is successful. This scepticism may also be linked to an under-reporting of bullying and harassment incidences.
- The lack of awareness and trust in policies also extended to polices relating to career progression and promotion.
- There were specific concerns around the University's use of short-term contracts. These were seen as having a negative impact on individuals, particularly those with protected characteristics. The long-term consequences for the research system were also highlighted: many promising researchers choose to leave academia at early stages of their careers, resulting in a reduced and less diverse workforce.
- A perceived lack of recognition of community and service roles in relation to career development, and the considerable challenges of balancing research with increased teaching and administrative demands, were significant concerns.
- The majority of participants felt the University should be doing more to support and include BAME researchers.
- Disability, mental health and wellbeing are areas where policy and practice could be improved.
- Fair recognition of contributions to research and authorship, and fair allocation of grant funding were all highlighted as significant concerns.
- The external research context (e.g., REF; paper and grant review) were identified as contributing to potential problems with research culture and the University's responses to these pressures needs to be considered.

3.2 What Now? Using the Survey Findings

The findings from this survey should form the basis of a dialogue with the research community to identify purposeful and appropriate actions that would support the development of positive culture across our diverse research contexts.

Evidence from the survey suggests that actions have the potential for different outcomes in the diverse research contexts of the University. Thus, the development of an action plan should be a context-sensitive collaboration involving a wide range of stakeholders within the University. There are four overarching areas that could provide a framework for guiding activity across the University. These areas are:

Core Values: How can people at all levels identify and agree the core values in operation across the University, (i.e., within the promotion structures and criteria; in the nature of appointments; in the working policies and practices; in relation to integrity and EDI)?

Pandemic response: What can to be done in the medium to longer term to level the playing field for researchers most impacted by the effects of Covid-19?

Culture and Behaviours: How can people across the University be supported to achieve a reasonable work-life balance? What can we do in relation to working better towards zero tolerance of bullying and harassment?

Communication: What have we learned from our Covid-19 experiences, what things do we want to hold on to? What would be useful and effective ways of building social capital across the University communities? How can we create a common language that supports collegiality, collaboration and interdisciplinarity?

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Appendices

Appendices are provided in a separate document.