

Equality Impact Assessment report for REF2021

1. Introduction

In March 2021, the University submitted its return to the national benchmarking exercise for research quality, the Research Excellence Framework (REF2021). This equality impact assessment (EIA) relates to LJMU's policies and procedures for REF2021, specifically in relation to identifying staff with significant responsibility for research (section 2), determining research independence (section 3) and for selecting outputs for the REF (section 4).

These policies and procedures were embedded within the University's <u>Code of Practice for</u> <u>REF2021</u> with governance on their implementation provided by LJMU's Code of Practice Working Group (CPWG) and the University Research & Knowledge Exchange Committee (URKEC). The development of this EIA has been a specific responsibility of the CPWG.

Each of the next three sections below follow a similar format: outlining the background and scope of the equality impact analyses, providing details of the impact assessments and related conclusions to enhance good equality, diversity and inclusivity practice. The Action Plan provided in Section 5, draws on findings from each these earlier sections.

2. Identifying staff with significant responsibility for conducting research on an independent basis (SRIR)

2.1 Background and scope

The process for identifying staff with SRIR is documented within Part 2 the University's Code of Practice for REF2021. Staff with SRIR status must be (and were) included in the University's REF submission. The information presented in this section largely reflects analysis of the data relating to the SRIR process and was collated in the Spring and Summer of 2020. Firstly though, commentary is provided on the University's appeals process.

Staff eligible for inclusion in REF2021 but who were not identified has having SRIR on the REF census date (31 July 2020) could appeal against that decision. The grounds for appeal as detailed in the Code of Practice were very specific: discrimination on the grounds of race, sex, disability and other protected characteristics; if absence had not been fully taken into account; that individual circumstances had not been fully considered; or where due process as described in the code of practice had not been followed. Appeals on the grounds of academic judgement (the assessment of the quality of the research outputs), were not eligible to be heard. Twelve appeals were received and progressed as detailed in Table 1.

Table 1. SRIR process appeal outcomes

Appeal outcome	Number of appeals
Out of time (received after the published cut-off date) and not considered	1
Withdrawn by the applicant	2
Appeal progressed to full hearing and upheld (staff attained SRIR status)	5
Referred to SRIR 'mop-up' exercise	4*
Total	12

*All four of these appeals were grounded in dispute based on professional judgement which was out of scope of the appeals process. These staff were given the opportunity to engage in an additional exercise designed to evaluate staff joining LJMU between 1 May and 31 July 2020. Three staff did so and all achieved SRIR status following re-assessment.

Three of the five appeals that progressed to full hearing were from female staff who had taken a period of maternity leave during the REF period. Whilst it was deemed positive that the process allowed for this, feedback from these staff indicated that it was quite an excessive way to deal with it, particularly when periods of maternity leave are part of institutional knowledge. Staff additionally mentioned difficulties with their experience of taking maternity leave whilst trying to meet research deadlines. More generally, staff who did appeal indicated a lack of understanding regarding the process within their local area of work, and that such uncertainty was not helpful. These issues are picked-up in section 2.3 and section 5.

Section 2.2 below compares the characteristics of staff identified as having SRIR with the characteristics of all staff eligible to be submitted to REF2021 within the University. The analyses assess the equality profiles of the University's academic staff for the following protected characteristics:

- Gender
- Age
- Ethnicity
- Disability
- Sexual orientation
- Marital status
- Parental leave
- Religious belief

The dataset underpinning the analyses was an extract of the University's HESA Staff Record 2019/20, specifically: staff with an academic employment function of 3 (primary employment function to undertake Teaching and Research). The population (headcount) of eligible staff was 1,079.

The relevant HESA Staff Record 2019/20 fields for the purposes of the EIA were:

- SIGRES: significant responsibility for research (LJMU's SRIR)
- REFUOA: unit of assessment (UOA) for REF2021 (all staff, not just SRIR)
- ACEMP: academic employment function
- REFFTE: the contractual full time equivalent
- Identifiers: OWNCONTD, FIRST NAME, LAST NAME, POSITION, ORGANISATION (School)

Staff on research-only contracts (academic employment function of 2) may be deemed eligible for inclusion in the REF submission if they meet criteria relating to 'independence' <u>and</u> SRIR. Section 3 of this EIA reports on that process.

2.2 Assessment of impact

The dataset of 1,079 staff employed by the University on the REF2021 census date of 31st July 2020 was processed and analysed by the University's HR Analyst. The protected characteristics data were applied at an individual level; anonymised data and visuals were then returned to the Head of Research Excellence & Research Strategy. Sections 2.2.1 to 2.2.9 below describe the interpretation of those visuals and associated data.

2.2.1 Gender

The gender distribution within the staff population in the HESA data was 42% female and 58% male (see Figure 1 for actual values). The proportion of females with SRIR compared to the total eligible female staff body was 48%; the equivalent figure for male staff was 60%. To redress this disparity, SRIR status would need to be assigned to an additional 56 female staff.



Figure 1. The numbers of eligible male and female staff and SRIR status

The data have also been examined UOA-level to reflect the disciplinary areas of the University's submission to REF2021. For staff without SRIR, UOAs with a disproportionately high percentage of staff on a gender basis are:

- Education: 68% of all staff aligned to UOA23 do not have SRIR status (n=55), of which 41 are female (75%)
- Allied Health Professions: 60% of all staff aligned to UOA3 do not have SRIR status (n=112), of which 71 are female (63%)

Those units/areas where the highest gender disparities for staff with SRIR status lie are:

- Computer Science & Informatics: 76% of staff aligned to UOA11 have SRIR status (n=42), but only 5 are female (12%). Compared to the whole female population (n=8) 63% of females have SRIR
- Engineering: 63% of staff aligned to UOA12 have SRIR status (n=47), but only 3 are female (6%). Compared to the whole female population (n=7) 43% of females have SRIR
- Sport & Exercise Science: 82% of staff aligned to UOA24 have SRIR status (n=64), but only 16 are female (21%). Compared to the whole female population (n=24) 67% of females have SRIR

2.2.2 Age

The age distribution of eligible staff and staff with SRIR is displayed in Figures 2 and 3. Within the (normal) distribution, the highest proportion of eligible staff falls within the age range 45-54 (33%). The age profile of staff with SRIR does not quite follow the same distribution, showing that a slightly higher than expected proportion of staff with SRIR fall into the 35-44 age group (39%; Figure 2).



Figure 2. The age distribution (% in each age group) for eligible staff and staff with SRIR



Figure 3. Comparison across age groups for eligible staff and staff with SRIR

Looking specifically at the 35-44 age group, 71% (n=232) of this group have SRIR status, compared to 49% (n=104) for those aged 45-54.

Examination of this data at UOA-level highlights the following disciplinary areas as having proportionately higher percentages of SRIR staff aged between 35-44 years:

- Earth Systems & Environmental Sciences: 27 (100%)
- Psychology, Psychiatry & Neuroscience: 26 (96%)
- Sport & Exercise Sciences: 26 (90%)
- Allied Health Professions: 24 (60%)

For staff with SRIR, the gender profiles across all age groups are broadly similar (Figure 4). Only within and beyond age 55 does the proportion of female staff with SRIR start to decline disproportionately compared to male colleagues (16.7% of all females; 22.8% of males). This is offset by there being more females with SRIR aged 25-34 than males; 63% of all SRIR staff in this age group.



Figure 4. Staff with SRIR: intersection profiles of age group and gender

2.2.3 Ethnicity

Ethnicity was known for 96% of eligible staff. Figure 5 displays the proportions of staff in each ethnic group for eligible and SRIR staff populations. The difference in these profiles is not statistically significant and the data provide confidence that the SRIR process for REF2021 does not unfairly discriminate against staff of ethnic minority origin.



Figure 5. The ethnicity of a) eligible and b) SRIR staff populations (% within each cohort)

2.2.4 Disability

Disability status was known for 90% of all staff. Figure 6 displays the disability status of eligible and SRIR staff; 9.4% of staff eligible for submission declared themselves as having a disability. Proportionally, disabled staff with SRIR status, are not significantly under-represented. However, it is important to note that 10% of staff have not declared their status with regards to disability, and there is the potential for under-declaration in this respect.



Figure 6. The disability status of eligible and SRIR staff presented as a proportion of the respective staff cohorts

2.2.5 Sexual orientation

Figure 7 presents a comparison of declarations with respect to sexual orientation for eligible and SRIR staff. Of the eligible and SRIR groups of staff, 77% and 80% respectively declared their sexual orientation as heterosexual. Of the respective cohorts, 3.5% and 2.5% declared themselves as lesbian, gay or bisexual. This would suggest that the REF2021 SRIR process does not significantly unfairly discriminate against staff with respect to sexual orientation. As above, given the proportion of staff in either cohort that prefers not to share their sexual orientation, or is unsure (18% overall), there is the potential for underdeclaration.



Figure 7. The proportions (%) of eligible and SRIR staff for which sexual orientation was declared (and otherwise)

2.2.6 Marital status

Marital status was not known for just over 6% of all staff, giving confidence in the overall conclusion here, that the SRIR process does not unfairly discriminate against staff on the basis of their marital status. Figure 8 shows a common distribution of proportions across all marital status categories.



Figure 8. Marital status across eligible and SRIR staff populations (%)

2.2.7 Parental leave

Instances of maternity leave, paternity adoption leave and paternity birth leave across the REF cycle (1st August 2013 to 31st July 2020) are presented in Table 1 for staff with and without SRIR status.

Absence type	SRIR	Not SRIR	Total
Maternity leave	34	16	50
Paternity adoption leave	0	2	2
Paternity birth leave	55	15	70
TOTAL	89	33	122

Table 2.	Instances of	f maternitv	and i	paternity	/ leave b	v SRIR	status
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Seventy-three percent of all staff who have taken leave of absence for maternity or paternity reasons have SRIR. In relation to maternity only, 68% of staff have SRIR status and the equivalent figure for paternity (birth and adoption) is 76%. The SRIR process does not unfairly discriminate against staff who have taken periods of maternity and/or paternity leave.

2.2.8 Religious belief

This characteristic was not available for 18% of all staff (information not known, refused, 'prefer not to say'; Figure 9) so the data should be interpreted with this in-mind. Broadly, the pool of SRIR staff is marginally under-represented by staff of Church of England and Roman Catholic religions. The SRIR group has a very slightly higher than expected proportion of staff with 'No religious belief' or who declare as Atheist. Overall, it does not

appear that the SRIR process unfairly discriminates against staff of any known religious belief (noting that information is not available for almost 20% of staff).



Figure 9. Religious belief across eligible and SRIR staff populations (%)

2.2.9 Fractional employment status

Although not a protected characteristic, the data relating to working hours were also considered from an equality perspective. Across all 1,079 eligible staff, 4.3% of those with SRIR status work part-time (FTE<1, including term-time only arrangements), with no genderderived differences noted. A greater percentage of staff without SRIR work on a part-time basis (9.4%), of which 5.2% are female.

Very few other inequalities were discernible within the data. Of staff with a known disability working on a fractional contract, a smaller proportion have SRIR status (but the numbers here are very small). However, some Faculty variation in relation to the proportion of part-time staff with SRIR status exist (Table 3).

Table 3. The proportion of i) staff holding fractional contracts in LJMU facult	ies and ii)
part-time staff with SRIR status	

Faculty	% of part-time staff in the Faculty	% of part-time staff with SRIR status within the Faculty
Faculty of Business & Law	8.43% (n=14)	0.6%
Faculty of Engineering & Technology	5.63% (n=13)	1.3%
Faculty of Arts, Professions & Social Sciences	22.91% (n=63)	6.91%
Faculty of Health	17.69% (n=26)	5.44%
Faculty of Science	11.48% (n=28)	6.15%

The data in Table 3 suggest that staff on fractional contracts are marginally underrepresented within the SRIR community in the faculties of Business & Law and Engineering & Technology. It is important to recognise this, and not only ensure that opportunities to engage in research are available to all academic staff regardless of fractional status, but that the SRIR process is rigorously and consistently applied in terms of proportionate expectations in research outcomes for staff who work part-time (Table 14, point 2.1).

2.3 Conclusions

The SRIR process continues to be undertaken on an annual basis and it is positive that it does not unfairly discriminate against staff on the basis of ethnicity, disability, sexual orientation, marital status, the taking of parental leave or religious belief. Based on feedback from the internal REF2021 Appeals Panel, attention should be given to the SRIR process taking into consideration certain staff circumstances where appropriate, and communications heightened locally to ensure staff are fully informed of any changes. The University's HR department is also increasing its support for female research active academics pre-, post and during maternity leave (Table 14 point 1.6).

There is however, a notable gender disparity in the proportion of female staff with SRIR status compared to the wider pool of eligible females (48% of eligible female staff had SRIR status, compared to 60% within the pool of male staff). Assessment of the data indicates that the areas where females are less likely to gain SRIR status are: Allied Health Professions (Nursing & Allied Health; Pharmacy & Biomolecular Sciences) and Education. These areas typically recruit academic staff with practitioner (as opposed to research) backgrounds to become educators of trainee professionals including pharmacists, nurses, midwives and teachers. The professions themselves have high levels of females in the workforce.

Now, more than ever, due to the forthcoming legacy impacts of COVID-19, the University must act to prevent a widening of this gender disparity. Within Table 14, points 1.1 to 1.6 relate to specific actions to mitigate against the most severe of consequences. Points 2.3 and 2.4 require the University to closely monitor and review the implementation and criteria of the SRIR process more generally in the context of COVID-19.

A higher than expected proportion of staff with SRIR fall into the 35-44 age group (39% of all staff). Assessment of the data indicates that the source schools for these staff are: Biological & Environmental Sciences, Sport & Exercise Sciences, Pharmacy & Biomolecular Sciences and the School of Psychology. This is not necessarily a concern as it reflects positive staff recruitment/appointment processes over the REF cycle from 2014. However, the challenge is to ensure that these staff remain at the University, retain SRIR status over time, and are supported in their research careers into the 45-54 age group and beyond (Table 14, point 2.1). If achieved, and with further high-calibre appointments, the trajectory for the University to have over 60% of academic staff with SRIR is within reach. In recognising that numerous factors influence career continuity and progression, point 2.2 within Table 14, proposes that a scaling-up of relevant support, incentives and reward mechanisms is required.

Finally, continued encouragement with respect to staff reporting/declaration of protected characteristics is also highlighted in Table 14 (point 3.1) so that the University can say with absolute certainty, that the SRIR process is not a discriminatory one.

3. Determining the eligibility (independence) of research-only staff

3.1 Background and scope

Staff on research-only contracts may be deemed eligible for inclusion in the REF submission if they meet criteria relating to 'independence'. The REF2021 Guidance on Submissions defines an independent researcher (IR) as "an individual who undertakes self-directed research, rather than carrying-out another individual's research programme". Research Assistants (sometimes also described as postdoctoral research assistants or research associates) are generally employed to carry out another individual's research programme and are not eligible to be returned to the REF unless they meet the definition of an independent researcher. A member of staff is not deemed to have undertaken independent research purely on the basis that they are named on one or more research outputs.

The process for establishing the independent status of members of LJMU's community of research-only staff (R-only) is documented within Part 3 of the University's Code of Practice for REF2021. The information presented below reflects analysis of the data relating to this process. It compares the characteristics of staff who i) elected to participate in the process; ii) self-identified as being an independent researcher; and iii) were objectively confirmed as independent.

LJMU's Corporate Systems Support Team supplied the REF Team with the names of staff with an academic employment function of 2 (R-only contracts). These staff were invited to participate in an online survey in June 2019 (n=133) and May 2020 (n=124). The survey posed a series of questions relating to indicators of independence including experience as a principal investigator and/or in leading substantial programmes of research or work packages. Affirmation to specific questions prompted a discussion between the respondent, the REF Team, and in most instances, the relevant REF coordinator. Following the meetings a decision was made on independence and communicated to the researcher with decisions reported to the University Research & Knowledge Exchange Committee.

The two datasets were combined, processed and analysed by the University's HR Analyst. The protected characteristics data were applied at an individual level; anonymised data and visuals were then returned to the Head of Research Excellence & Research Strategy. Analyses are presented in section 3.2, but the headline outcomes from the entire process are:

Staff Survey completion: an equal proportion of responders completed (45%) or did not complete (45%) the survey, with 10% of all R-only staff submitting a nil-return. Overall, more R-only staff engaged in the process than did not by a factor of 10%.

Self-declaration: 21% of the R-only population self-declared as independent, 34% did not, with the remaining 45% of researchers not responding to the survey.

Confirmed IR status: of all staff invited to complete the survey (179 individuals), 10% were confirmed as independent researchers (n=18).

3.2 Assessment of impact

The analyses assess the equality profiles of R-only staff for the following protected characteristics:

- Gender
- Age
- Ethnicity
- Disability
- Sexual orientation
- Marital status
- Religious belief

Sections 3.2.1 to 3.2.7 below describe the interpretation of visuals and associated data. With the dataset comprising 179 R-only staff in total, it is inherently difficult to draw firm conclusions. Additionally, due to exceptionally small numbers, the analysis of parental leave data was not undertaken.

3.2.1 Gender

A greater proportion of the R-only population were male (54%; graph not shown), however males were more likely to not respond to the survey than females (51% of males were non-responders, 39% females; Figure 10).



Figure 10. R-only staff engagement in the survey process by gender

Fifty percent of R-only staff self-declaring as independent were female (graph not shown); similarly, of those not declaring as independent, 53% were female.

Of the 18 R-only staff confirmed as independent, 11 were female (61%). Overall, 14% of all female R-only staff were confirmed as independent researchers compared to 8% of males. All stages of the process, from self-declaration to confirmation, did not discriminate on the basis of gender.

3.2.2 Age

The majority of R-only staff were aged between 25-34 years (48%) and 35-44 years (33%); graph not shown, but in-line with the profile of eligible academic staff (Figure 3). Staff within these age groups were slightly more actively engaged with the survey: 58% of staff aged between 35-44 years either completed it or sent a nil-return; the equivalent figure for the 25-34 age group was 56%.

Of all researchers self-declaring as independent, 39% were in the 25-34 age group and 50% were aged between 35-44 years ('Yes' respondents Figure 11). The majority (56%) of staff not declaring themselves as independent were aged between 25-34 years. As being a PI and leading significant research programmes is dependent on experience and time in-post, this finding is unsurprising.



Figure 11. The age profile of researchers who self-declared as independent (yes), or not.

Of staff who were confirmed as an IR, the majority (64%) were aged between 35-44 years (graph not shown). Within the pool of staff aged 25-34 years who had self-declared ('Yes' or 'No'), just 6% were confirmed as independent. These outcomes are consistent with the REF criteria regarding 'independence' which as indicated above, are linked to career stage and experience. All female R-only staff confirmed as independent were aged between 25-34 or 35-44 years; all bar one male member of R-only staff also fell into these age bands.

3.2.3 Ethnicity

A quarter (n=41) of the R-only staff population were of ethnic minority origin (ethnic group was 'unknown' for 9% of researchers invited to participate in the survey). Fifty-nine percent (n=24) of researchers of ethnic minority origin did not respond to the survey; the comparable

figure for white researchers was 41% (Figure 12). Research-only staff of ethnic minority origin were therefore under-represented in terms of their engagement in the survey. However, over half (56%) of all R-only ethnic minority staff were young/aged between 25-34, likely with limited experience and time in-post.



Figure 12. R-only staff engagement with the survey by ethnic group

Respondent R-only staff of ethnic minority origin were equally likely to self-declare as independent or not (Yes/No; Figure 13). The proportion of white researchers who did not declare as independent was 64%.



Figure 13. Staff self-declaration as independent or not, by ethnicity

Twenty-five percent of staff self-declaring as an IR were of ethnic minority origin ('Yes' Figure 13), however less than 1% of staff confirmed with IR status were of ethnic minority origin (one person in 18; Figure 14).



Figure 14. Confirmed IR status by ethnic group

Although R-only staff of ethnic minority origin were under-represented within the respondent group, the majority of these staff were younger, and therefore less likely to be independent. White R-only staff were less likely to declare as IR but those that did were three times as likely to have this status confirmed. The small number of ethnic minority staff self-declaring as IR (n=9) does not make it possible to draw absolute conclusions regarding discriminatory potential within the final decision-making.

3.2.4 Disability

Overall, engagement in the survey was not affected by disability status but the proportion of all R-only staff with a known disability was just 6% (n=10; Figure 15).



Figure 15. R-only staff engagement with the survey by disability group

Disability status profile was broadly comparable across the groups self-declaring as independent (5% of staff declaring 'Yes') and those not doing so (6%; graph not shown). Noting the very small number of R-only staff with a disability actively responding to the survey (n=2), it is appropriate to conclude that positive (or negative) self-declaration is not

affected by disability status. Disability status was known for all staff confirmed as IR, but just 1% had a known disability.

3.2.5 Sexual orientation

Sexual orientation was known for 80% of the survey population (LGBTQ n=11; Heterosexual n=128; unknown n=35). The majority of LGBTQ researchers within the survey population did not respond (71%); the equivalent proportion of heterosexual researchers was 42% (Figure 16). LGBTQ R-only staff were under-represented in terms of their engagement in the survey.



Figure 16. R-only staff engagement with the survey by sexual orientation

R-only staff who's sexual orientation was LGBTQ were broadly, equally likely to self-declare as independent (5% of staff who declared 'yes') as not (3%); Figure 17. The proportion of heterosexual researchers that did not declare as independent was 79%.



Figure 17. Staff self-declaration as independent or not, by sexual orientation

No staff known to be of LGBTQ origin were identified as independent researchers. Thirteen percent of all heterosexual staff self-declaring as independent had their IR status confirmed.

Under-representation of staff of LGBTQ sexual orientation in terms of their engagement with the R-only survey could signal that the approach and/or communications aimed at the R-only population needed to be more inclusive.

3.2.6 Marital status

Overall, 47% of all R-only staff surveyed were not married, 30% were married and 23% unknown, and marital status had no bearing on staff engagement with the survey (graph not shown).

Being married also had no significant bearing on positive or negative self-declaration (53% of married researchers responded 'yes', 47% 'no'; Figure 18). A higher proportion of R-only staff not declaring as independent were not married (64%) or of unknown marital status (76% of staff with unknown status), compared to researchers declaring themselves independent.



Figure 18. Staff self-declaration as independent or not, by marital status

R-only staff with confirmed IR status were broadly, equally likely to be married or unmarried (15% and 12% respectively of each marital status group; graph not shown). Marital status was not a mediating factor in whether an individual gained IR status or not.

3.2.7 Religious belief

Religious belief status was known for 85% of the R-only population; where the status was known, the majority of staff had religious beliefs (74%). Two-thirds of staff with no religious beliefs engaged with the survey ('yes' or nil-return) compared to 49% staff with religious beliefs (Figure 19).



Figure 19. R-only staff engagement in the survey by religious belief

Just over half of those R-only staff self-declaring as independent had a known religious belief (52%); graph not shown. Of those staff confirmed as independent researchers, 60% had known religious beliefs, 40% did not. There is no evidence that any stage of the IR process discriminated on the basis of religious belief.

3.3 Conclusions

The analyses in section 3 have considered the R-only staff data at three stages of the IR process:

- i) participation in the R-only survey process
- ii) whether staff self-identified as being an independent researcher or not
- iii) the outcome/decision-making to confirm IR status

The above interpretations demonstrate that for all three stages, the IR process does not unfairly discriminate against staff on the basis of gender, age, disability, marital status or religious belief.

Researchers of ethnic minority origin and of LGBTQ sexual orientation were underrepresented at stages i) and iii) of the process but these protected characteristics did not appear to influence the decision of an individual researcher to self-declare as independent. There is no evidence that the final decision-making on IR status was discriminatory (based on small numbers), however future processes seeking confirmation of independent researcher status should reassess communications and the planned approach to ensure inclusivity within these groups in particular (Table 14, point 3.2).

4. The University's process for selecting outputs for REF2021

4.1 Background and scope

The University's approach to the selection of outputs for REF2021 is documented within Part 4 of the University's Code of Practice. The information presented below reflects the outcome data on output attribution (minimum of one, maximum of five) for staff submitted to the REF, principally analysed by protected characteristic.

The analyses assess the equality profiles of the University's 604 submitted academic staff for the following characteristics:

- Gender
- Early career researcher status and Age
- Ethnicity
- Disability
- Parental leave
- Fractional employment

It was not possible to perform a robust analysis of the data for sexual orientation, religion and marital status (for the latter two protected characteristics, information was only available for 25% of staff).

4.2 Assessment of impact

The dataset of 604 staff included in the University's submission to REF2021 was processed and analysed by the University's Head of Organisational Development. The protected characteristics data were applied at an individual level; anonymised data and visuals were then returned to the Head of Research Excellence & Research Strategy. Sections 4.2.1 to 4.2.6 below describe the interpretation of those visuals and associated data.

4.2.1 Gender

The gender distribution within the REF submitted staff population was 36% female (headcount n=219) and 64% male (n=385). The dispersal of attributed outputs across both groups is displayed in Table 4. The average number of outputs attributed to males was 2.31, and females 2.11. The discrepancy can largely be accounted for by the fact that males were more likely than females to be submitted with five outputs (Figure 20), however overall, there was no statistically significant difference in the number of attributed outputs distributed across males and females.

#Outputs	Female	Male	Total
1	109	179	288
2	41	64	105
3	24	47	71
4	25	34	59
5	20	61	81
Total	219	385	604

Table 4. The dispersal of attributed outputs across submitted male and female staff



Figure 20. The dispersal of outputs in percentage terms within male and female groups

Fifteen of the sixteen units submitted by the University returned at least one male member of staff with the maximum count of outputs. Furthermore, 37 of the 61 males that were submitted with five outputs were members of the Professoriate, the highest concentration of which were aligned to UOA24 Sport & Exercise Sciences (n=7) and UOA12 Engineering (n=5). Both of these units have a high proportion of male staff (section 2.2.1).

4.2.2 Early career researcher status and Age

First, as a proxy for age group analyses, early career researcher status has been examined and the number of attributed outputs for ECRs compared with the equivalent number for staff who's research careers are more established.

Ninety-eight staff were submitted with ECR status (13.6% of all staff submitted to REF2021; 42 females and 56 males). There was no significant difference between the proportion of males and females returned as ECRs (14% of submitted females and males were ECRs).

Overall, ECRs had a slightly lower average number of outputs attributed to them: 2.18 compared to 2.24 for non-ECR staff. This slight difference is again due to a higher proportion of those without ECR status having 5 attributed outputs, as can be seen in Table 5.

	ECR						
# Outputs	Yes		N	0			
	#	%	#	%			
1	47	48%	241	48%			
2	18	19%	87	17%			
3	11	11%	60	12%			
4	12	12%	47	9%			
5	10	10%	71	14%			

Table 5. Early-career researcher status and submitted output attribution

Table 6 shows the output attribution for ECRs by gender. Meaningful interpretation of the data is difficult given the small number of staff but in general, the distribution of the submitted outputs within and between male and female groups show no patterns of concern.

Table 6. Output attribution of submitted early-career researchers by gender

	ECR Gender						
# Outputs	Fen	nale	Male				
	#	%	#	%			
1	19	45%	28	50%			
2	9	21%	9	16%			
3	4	10%	7	13%			
4	5	12%	7	12%			
5	5	12%	5	9%			

Staff aged between 25 and 34 years were submitted with a lower average number of attributed outputs (Table 7). This effect was not due to ECR status and likewise ECR status made no statistically significant difference to the average number of outputs for any other age bands.

Table 7. 1	The average nu	mber of attributed	outputs for	submitted staff	within each age
band					

Age Band	# staff	Average # attributed outputs
25-34	52	1.69
35-44	238	2.38
45-54	178	2.22
55-64	112	2.17
65+	24	2.42
Total	604	2.24

The actual number of outputs attributed across the age bands is shown in Figure 21. Compared to the largest age group (staff aged 35-44 years), there was a statistically

significant difference within the youngest age group in the number of outputs attributed. Staff aged between 25-34 years were more likely to be returned with a single output.



Figure 21. The number of attributed outputs by age band

4.2.3 Ethnicity

Overall, 79.6% of staff returned are from a white background (Table 8; c.f. 80.3% of LJMU's Academic and Research workforce have declared their ethnicity as white).

Ethnicity	No	%
White	481	79.6%
Asian	31	5.1%
Black	16	2.6%
Mixed	8	1.3%
Other minority group	44	7.3%
Unknown	24	4.0%
Total	604	

Table 8. Staff submitted to REF2021 by ethnicity

The number and proportion of outputs attributed to staff across all ethnic groups exhibits some variation (Table 9 and Figure 22). Staff of Asian, Black and Mixed ethnicity were proportionally more likely to be submitted with a single output compared to White and other minority staff. Conversely, staff of Asian ethnicity and Other minority group heritage were proportionally more likely to be returned with five outputs. Only 1 member of black staff (6%) had at least 4 attributed outputs compared to 15 (35%) of Other minority group staff. Bearing in-mind the small numbers of staff within ethnic minority groups, the data do not signal discriminatory practice in outputs selection.

# Outputs	As	ian	Bla	ick	Mi>	ced	Otl mine gro	her ority oup	Unkr	nown	Wr	nite	A	.11
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
1	17	55	9	52	5	51	17	41	13	44	227	45	288	46
2	3	13	2	10	0	0	7	13	3	15	90	20	105	19
3	3	6	4	31	1	21	5	11	4	28	54	11	71	12
4	2	6	1	6	1	11	7	16	1	4	47	11	59	10
5	6	19	0	0	1	17	8	19	3	8	63	13	81	13
Total	31		16		8		44		24		481		604	





Figure 22. The number of outputs attributed to staff by ethnic group

Additional analyses of ethnicity data confirm that there is no statistically significant difference in the attribution of outputs in relation to gender. Furthermore, whilst in percentage terms, a higher proportion of submitted staff within ethnic minority groups have ECR status, due to the numbers involved this is not statistically significant.

4.2.4 Disability

Thirty-three LJMU staff members submitted to REF2021 had a recorded disability (5.5%; overall 9.3% of LJMU's Academic and Research workforce have a declared disability). The data are presented in Table 10. Although proportionally, it appears that staff with a declared disability/disabilities were more likely to be submitted with fewer outputs compared to staff with no declared disability, there was no statistically significant difference between these groups.

# Outputs	No declared disability		Declared disability		Unknown		All	
	# staff	%	# staff	%	# staff	%	# staff	%
1	263	47%	17	52%	8	47%	288	48%
2	94	17%	8	24%	3	18%	105	17%
3	65	12%	3	9%	3	18%	71	12%
4	53	10%	3	9%	3	18%	59	10%
5	79	14%	2	6%	0	0%	81	13%
Total	554		33		17		604	

Table 10. Output attribution based on disability status

4.2.5 Parental leave (Maternity, Shared, Adoption and Paternity)

This section considers instances of leave across the REF cycle (1st August 2013 to 31st July 2020). The average number of outputs attributed to female members of staff who had taken parental leave was lower (1.9) than females who had not taken parental leave (2.16; Table 11). The difference is statistically significant. Sixty percent of females who had taken parental leave were associated with a single output compared to 48% of females with no parental leave. Interestingly, a similar proportion of females in each group were submitted with the maximum number of permitted outputs. However, it should be noted that the overall sample size is small (Table 12): 40 (18%) of the 219 females returned had taken some parental leave in the time period.

The same difference is not seen for males who had and had-not taken parental leave with there being no statistically significantly difference in the number of attributed outputs across the two groups.

Table 11. The average number of outputs attributed to submitted staff by gender and
the prevalence of parental leave

Gender	Parental Leave	Average # outputs	
Fomolo	Yes	1.90	
Female	No	2.16	
Mala	Yes	2.29	
wale	No	2.31	
All		2.24	

# Outputs	# Females with parental leave	# Females with no parental leave	
1	24	85	
2	6	35	
3	4	20	
4	2	23	
5	4	16	
Total	40	179	

Table 12. The number of outputs attributed to submitted female staff who had and had-not taken parental leave

4.2.6 Fractional employment status

Although not a protected characteristic, the data relating to working hours were also considered from an equality perspective.

As would be anticipated, part-time staff were submitted with fewer outputs than full-time staff (average 1.7 outputs for part time staff, 2.28 full-time). This was consistent for both males and females (Table 13), and there was no statistically significant difference between the number of outputs attributed to male and female part-time employees.

Overall, the number of part-time workers returned was low, with 8.2% of those returned working on a fractional basis (c.f. 17.5% of LJMU's Academic and Research staff work part-time; 10.1% [n=24] of females work on a part-time basis compared to 7.1% [n=24] of males).

	Females				Males			
	Full time		Part time		Full time		Part time	
# Outputs	%	# Staff						
1	47.2%	92	70.8%	17	45.5%	165	63.6%	14
2	19.5%	38	12.5%	3	16.8%	61	13.6%	3
3	11.3%	22	8.3%	2	12.7%	46	4.5%	1
4	12.3%	24	4.2%	1	8.8%	32	9.1%	2
5	9.7%	19	4.2%	1	16.3%	59	9.1%	2

Table 13. Output attribution data based on contract status (part-time, full-time)

4.3 Conclusions

Overall, the outputs selection process for REF2021 did not unfairly discriminate against staff on the basis of gender alone, early-career researcher status, ethnicity, disability and fractional employment status. Data for sexual orientation, religion and marital status was not analysed.

Staff aged between 25-34 years were more likely to be returned with a single output. Furthermore, female members of staff who had taken parental leave during the REF cycle were submitted with fewer outputs than female colleagues who had not, and were more likely to be returned with a single output. The number of submitted female staff taking parental leave was small (n=40) and bearing in-mind that taking parental leave did not preclude a female member of staff being submitted with five outputs, the conclusions to be drawn should be tempered to a degree. Nonetheless, it is important to recognise from section 2, the gender disparity in the proportion of female staff with significant responsibility for conducting research, and the clear need to continue to support female staff generally and strengthen support mechanisms pre-, during and post periods of parental leave (Table 14, point 1.6 and all of 2).

5. Action Plan

In drawing together the EIA outcomes from sections 2.3, 3.3 and 4.3, Table 14 sets-out a series of institutional actions. A number of outcomes are known issues within the University and several actions are complimentary to the work of LJMU's Athena Swan Working Group and bound within responsibilities under the Race Equality Charter. All are long-term actions, that will be monitored throughout the current/new REF cycle.

Table 14. LJMU Equality Impact Assessment Action Plan

	Action required	Rationale	Timescale	Responsibility
1.	 Re. GENDER: the University will continue to implement initiatives that support women and will do this in the following ways: 1.1 By monitoring and evaluating implementation of the institutional Athena Swan (Bronze) Action Plan with respect to gender-relevant actions (ASWG) 1.2 By members of the Women Professors Network and Women Readers Network mentoring staff with ambitions to achieve internal promotion to Professor or Reader 1.3 By recognising the value of the Women Professors Network: formalising the direct communication channels to University senior management to enable articulation of the challenges and issues identified through focus groups and oversight of structured meetings of the broader Women's Academic Network 1.4 By offering additional structured opportunities for female academics to progress in their career, including LDF support for women to participate in the Aurora programme and providing bespoke support for under- represented groups e.g. BAME female academics 1.5 By HR monitoring and evaluating implementation of the institutional Race Equality Action Plan in respect of intersectionality with GENDER 1.6 By HR reviewing and adjusting the provision of support for female academics pre, post and during maternity leave and integrating SRIR within dialogue with dedicated support posts e.g. the new Parent/Carer Advocate role. 	There is a continuing need to understand and address cultural practices, operational challenges and norms that may perpetuate under-achievement of female staff. Anecdotal evidence (Summer-Winter 2020/1) indicates that during the COVID-19 pandemic, women academics' research productivity was disproportionately affected by increased caring and home-schooling responsibilities (amongst others). The Aurora programme is organised by the Leadership Foundation for Higher Education and its goal is to encourage and enable the next generation of women in HE leaders. LJMU submitted its Race Equality Charter application in July 2021. Female staff submitted to REF2021 who had taken parental leave were attributed to fewer research outputs than females colleagues who had not taken leave.	Spring 2021 to Spring 2026	Pro-Vice Chancellor Strategic Initiatives as Chair of LJMU's Athena Swan Working Group (ASWG) Human Resources (HR; Equality) Leadership & Development Foundation (LDF) Women Professors Network Women Reader Network

2.	The implementation of local practices that support ALL eligible academic staff to achieve and retain SRIR status, but those falling into the AGE group 25-34, and female staff who have taken parental leave:	The University has a goal to increase the proportion of staff with SRIR from the current baseline of 57% to 62% in 2026 (predicated on a 1% year-on-year increase).	From Spring 2021, annually to Spring 2026	Faculty Associate Deans for Research & Knowledge Transfer
	2.1 Localised action plans to support staff to achieve SRIR status, including the provision of positive feedback and clear development pathways for staff either not yet achieving SRIR status (including staff on part-time contracts), or who's research productivity is diminishing. This is a key responsibility of Research Institute, Centre and Group leaders, School and Faculty management, involving mentoring, peer review	The burgeoning proportion of staff with SRIR currently falling into the 35-44 age group and needing to support individuals to remain at LJMU and continue or progress their careers. Attention to be given to supporting all staff working on a fractional contract, particularly those in the Faculty of Business & Law and		Research Institute, Centre and Group Leaders Pro-Vice Chancellor for Research and Knowledge Exchange
	 with the aim of increasing critical mass 2.2 Scaling-up (or not volume-limiting) opportunities around academic staff reward and recognition so as not to disadvantage staff within a high volume age group 2.3 Annual review of the criteria for gaining SRIR status with additional consideration given to no-detriment adjustments in light of the impact of the COVID-19 pandemic on research productivity (including specific groups e.g. women and BAME staff) 2.4 Annual reflection (process review) of the implementation of the SRIR process more broadly to 	the Faculty of Engineering & Technology. Anecdotal evidence (Summer-Winter 2020/1) indicates that during the COVID-19 pandemic, women and BAME academics' research productivity was disproportionately affected by home-working arrangements not being conducive to remote working. Staff aged 25-34 years and female staff taking parental leave were submitted to REF2021 with fewer attributed outputs.		
	consider pan-University consistency in application and outcomes, and the potential inclusion of specific individual circumstances information e.g. parental leave			
3.	 3.1 There is a need to encourage staff declaration of protected characteristics, including for example DISABILITY, SEXUAL ORIENTATION and RELIGIOUS BELIEF 3.2 Future implementation of the process to determine research independence should reassess communications 	There is a potential for under-declaration of these characteristics, thereby skewing the data reported in equality impact assessments. This has the potential to mask inequality in the University's processes.	Spring 2021 to Spring 2026	Human Resources REF Team

and the planned approach to ensure inclusivity of ETHNIC MINORITY groups and LGBTQ staff in particular	Whilst there was no evidence of discriminatory behaviour in determining independent researchers for REF2021, ethnic minority groups and LGBTQ staff were under-represented within the process.		
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