Research activity in British clinical psychology training staff: Do we lead by example?

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Abstract

Sixty two members of staff from clinical psychology doctoral training programmes across Britain completed a survey about their levels of research output, the extent to which they felt this met their own expectations and job requirements and influenced promotion prospects. In addition, they listed perceived barriers to and facilitators of research activity. There was wide variation in research activity, such that many participants had limited or no publications while a smaller proportion had many. Respondents were as, or more, dissatisfied than satisfied with publications, submissions and grant applications and over half felt that the number of grant applications failed to meet their expectations. Support from and collaboration with colleagues was the main facilitator for research, while a lack of time was viewed as the main barrier.
Learning takes place in a particular social and cultural context and has an impact on the student’s identity. Wenger (2000) argues that learning the explicit knowledge and implicit rules that make up a given community of practice is a crucial part of the learning process. In this context, the aim of educating trainee clinical psychologists is to facilitate the transition from the identity of novice to a competent member of the community of practice. An important part of this process is the modelling by qualified staff of behaviour, rules and values of the community of practice of the profession, which are often unwritten.

An explicit part of the clinical psychologist’s identity is that of researcher. The scientist-practitioner model of clinical psychology views members of the profession as conductors and consumers of research, who apply research findings to inform practice. Clinical psychology training programmes in Britain appear to have embraced the scientist-practitioner model in emphasising the importance of research skills: research methods teaching forms part of the curriculum and training culminates in a doctoral level research thesis (i.e. a substantial and original piece of clinically relevant research). However, the majority of clinical psychology doctoral theses are left unpublished (approximately 75%; Cooper & Turpin, 2007), which has caused people to question how well the model has been adopted (see Gelso, 2006) and the extent to which the identity of ‘researcher’ is being modelled for trainees by trainers and qualified staff.

Arguably, the scientist-practitioner model has not been adopted within clinical psychology as a profession, as research activity is low (Milne, Britton, & Wilkinson, 2000; Thomas, Turpin, & Mayer, 2002). One method of measuring whether clinical psychologists conduct research is to examine the number of publications produced. Levy (1962) reported that the mode number of publications within qualified clinical psychologists in the United
States was zero (a finding he labelled ‘the skew in clinical psychology’) where around a third of clinical psychologists had no published papers at all. Similar findings have since been reported, both within the US (e.g. Barrom, Shadish, & Montgomery, 1988; Norcross, Karpiak, & Santoro, 2005) and the UK (Milne et al., 1990). Norcross et al. (2005) point out that the median number of publications in their survey of US clinical psychology practitioners was 7 and that the majority had published at least one article, therefore a continual referral to the mode of zero alone can lead to false conclusions. Overall, the evidence suggests that there is a group of clinical psychologists who are research active but that there is a larger group who are not. However, it should be acknowledged that not publishing research does not necessarily mean that research is not being conducted or consumed.

Clinical psychology is not unique in this regard: research activity is low within health professionals in general (Parahoo, Barr, & McGaughan, 2000). Watson, Clarke, Swallow and Forster (2005) reported that research and development culture (as rated by nursing staff in three NHS Trusts) was comprised of three factors: ‘support’ (support within the work environment), ‘personal skill and aptitude’ (self-rated skills in conducting R and D activity) and ‘personal R & D intention’ (i.e. how much the person was willing to be involved). In other words, organisational and personal factors contributed to nurses’ perceptions of the research and development culture. Tanner and Hale (2002) summarise barriers to research activity in nurses as: a lack of staff, lack of time, lack of support, lack of perceived value of research, a perception that research is not part of the nursing role and the view that research findings are unlikely to affect practice. Tanner and Hale subsequently found that a group of research active nurses perceived these barriers as being less significant, although they acknowledged that lack of support, staff and cost are relevant. In terms of overcoming barriers, the nurses identified encouragement from others as helping get work published and
accepting that they would need to do research outside of normal working hours. The authors acknowledge that this study was undertaken with a small sample of research active participants. However, taking the findings together, it seems that barriers identified by some members of the profession may not be universally perceived as such and that support and resources are important factors for research activity.

Clinical psychology and nursing share a health professional status and are therefore likely to be subject to some of the same barriers and facilitators to research activity. Past surveys have revealed that research findings are perceived by many as irrelevant to practice (Cohen, 1979). Lack of (paid) time and resources in order to conduct research and the number of colleagues involved in research may also have an influence on research activity (Barrom et al., 1988; Haynes, Lemsky, & Sexton-Radek, 1987). In addition, Holttum and Goble (2006) have argued that research is not seen as the norm within the profession. To the authors’ knowledge, there has been no published investigation of perceived barriers and facilitators of research activity in clinical psychologists in Britain.

Clinical psychologists who deliver clinical psychology training are not, always in full time teaching/academic roles, which has implications both for publication rates and for the perceived barriers and facilitators of research. In response to Levy’s paper, Barclay (1964) argued that it is possible to divide clinical psychologists into academicians and clinicians, where the academic group produce significantly more research publications than the clinicians. He suggested that the pressure of the academic setting would serve to promote research activity within this subgroup, though acknowledged that an inclination towards research would cause gravitation to one or the other profession.

The community of practice of the academic does differ from that of the health professional. Processes which assess the quality of research produced by staff at higher education institutions in the UK and which award funding accordingly, such as the...
forthcoming Research Excellence Framework (REF), do create an expectation that academic staff will undertake and publish high quality research. Indeed academic clinical psychologists have, in the past, submitted as part of successful Research Assessment Exercise (RAE) panels (Cooper & Turpin, 2007). The purpose of producing high quality research is, therefore seen as contributing to the development and maintenance of ‘a dynamic and internationally competitive research sector that makes a major contribution to economic prosperity, national wellbeing and the expansion and dissemination of knowledge.’ (REF 14, 2011, np).

In contrast, Manthorpe, Alaszewski, Motherby, Gates and Aver (2004) argued that NHS employment places emphasis on activities other than research, i.e. management and clinical work. Agnew, Carson and Dankert (1995) found that psychologists in an academic setting were more research active than their counterparts in practice roles. Therefore, it might be expected that those clinical psychologists who are employed at universities to deliver clinical psychology training (i.e. have an academic role), would be more research active than those who are purely practice-based. This would be the case even if the academic position is part time (since many clinical psychologists have university and practice posts) due to either a natural gravitation towards scholarship or pressure from the academic institute to conduct research.

The first aim of the present study was therefore to gauge the research activity of those involved in clinical psychology training programmes and based at a university. The study also aimed to gain a sense of whether research output was viewed as satisfactory by participants, met their expectations, job requirements and was perceived as being related to promotion. Finally, the survey aimed to identify trainers’ perceptions of those factors which had either facilitated or provided a barrier to conducting research.

Method
Participants

Programme administrators were contacted for all clinical psychology doctoral training programmes across Scotland, England and Wales and asked to distribute an email containing an invitation to participate in the study and a link to the online questionnaire (www.surveymonkey.com). There were 75 initial respondents, however 13 of these had only completed demographic information and their data were removed from further analysis. This left a final sample of 62, 36 females and 26 males. This included participants from England \( (n=45) \), Scotland \( (n=15) \) Wales \( (n=2) \). Thirteen described their role as ‘clinical’ and 39 as ‘academic’. Of the remaining 10 who did not answer this question, the descriptive answers were: programme director, personal and professional development tutor, recruitment and marketing director, clinical/academic tutor, admissions tutor/clinical lecturer. Length of employment ranged from less than 6 months to 24 years, and the number of days working on the training programme each week ranged from 1 to 5, with a median of 3 days. Thirty had had a previous academic or research post and 37 had another postgraduate qualification. When divided into clinical and academic job groups, 2 out of 13 clinical staff had had a previous academic post and 3 had another postgraduate qualification. Twenty four of the 39 academic staff members had had a previous academic post and 29 had another postgraduate qualification.

Research activity questionnaire

An online survey was developed to enable respondents to access the survey quickly and easily, to allow responses to remain anonymous and avoid postage costs. The questions aimed to determine demographic information, research activity and perceived facilitators and barriers of this activity.

Demographic information.
Participants were asked to indicate their gender and location (i.e. England, Scotland or Wales), to indicate their role in the training programme as either academic or clinical or provide an alternative job title, their length of employment in years and number of days they worked per week, in relation to their current training programme position. They were also asked to indicate whether they had had a previous academic or research post (yes or no) and whether they had any other postgraduate qualification (i.e. other than a Clinical Psychology Doctorate).

**Levels of research activity.**

Participants were asked to provide the number of research publications, number currently submitted, grant applications made and won since starting their current training programme job. For each of these different research activities, they were asked to indicate how satisfied they were with their output from fixed options (dissatisfied, neutral or satisfied), how much they perceived it met their job requirements (fails to meet the requirements, meets the requirements, exceeds the requirements), how much it met their expectations (fails to meet my expectations, meets my expectations, exceeds my expectations) and how much they felt that their promotion depended on it (not at all, to some extent, to a large extent).

**Barriers and facilitators of research activity.**

In the final section of the questionnaire, two open ended questions asked the respondents to list the factors that they felt had facilitated and created barriers to their own research activity. The facilitators and barriers to research activity were listed in statements and organised into themes by both authors.
Results

Research activity

Table 1 shows the modes, medians and ranges for each form of research activity for the total sample and for those with a clinical and academic role separately. Some of the academic respondents did not provide a response for all the activities, hence ns are not uniform for these respondents or the total sample.

[Insert Table 1 about here]

Table 1 shows that the mode numbers of published papers, current submissions and grant applications made and won were zero for the total sample and for the clinical role respondents. However, the academic role respondents had a mode of 3 published papers, 2 papers currently submitted and 1 grant application made.

Levels of satisfaction with output, perceptions of whether it meets job requirements and own expectations

For each of the research activities, the participants rated their satisfaction, and the extent to which they perceived it met the job requirements, own expectations and promotion depends on it. The ratings for the total sample and separately for those with academic and clinical roles are shown in Table 2.

[Insert Table 2 about here]

For those with an academic role, most perceived that promotion depended on the number of research publications, submissions and grant applications. For research
publications and submissions, the trend was towards these meeting job requirements, though just under half the sample felt that the number of grant applications failed to meet requirements. There were fairly even numbers who felt either satisfied or dissatisfied with the number of publications and submissions, but many more felt dissatisfied with the number of grant applications than felt neutral or satisfied. In terms of expectations, the number of publications and grant applications did not meet most respondents’ expectations, while even numbers rated the number of current submissions as failing to meet or meeting own expectations.

For the clinical role respondents, it is of note that for some, promotion was perceived to depend on publications and submissions (less so grant applications). Levels of satisfaction tended towards the dissatisfied or neutral rather than satisfied for all three. The ratings for meeting job requirements indicated that the majority felt their activity met these, but in terms of own expectations, the ratings indicated that a large proportion felt that the number of publications did not meet these.

**Facilitators and barriers of research activity**

Statements about facilitators and barriers fell within the same broad themes: i) support and collaboration with colleagues, ii) organisational support, structure and culture, iii) supervision and support of trainees, iv) links with NHS and research networks, v) time, vi) other resources, vii) nature of research area, viii) personal motivation and ix) role on the clinical psychology training programme. Statements relating to these themes are shown in Table 3, along with the number of people who cited each as a barrier or facilitator.

[Insert Table 3 about here]

For facilitating research activity, the support and collaboration with colleagues was most frequently cited, followed by organisational support, structure and culture, then personal
motivation and supervision/support of trainees. Time was cited as the greatest barrier, followed by other resources and organisational support, structure and culture.

**Discussion**

This brief survey aimed to ascertain levels of research activity in clinical psychology training staff. Second, it aimed to establish the extent to which participants perceived their research activity as meeting their expectations, job requirements and opportunity for promotion. Finally, the survey aimed to gain a sense of those factors which were perceived to aid or hinder research.

**Overall research activity**

In terms of overall research activity, there was variation in the number of publications, submissions, and grant applications across participants. The number of publications was positively skewed, such that many respondents had not published any papers, but a portion of individuals were highly productive. This finding is consistent with the pattern originally reported by Levy (1962), however, it is impossible to compare the findings directly as respondents in the present study were asked to report the number of publications since entering their current university post, and time of employment ranged from 6 months to 24 years. Since some of the respondents had previously held academic or research jobs, measuring the total number of publications would not necessarily have reflected participants/ research output within a clinical psychology training role. The number of currently submitted papers may, therefore, provide a better indicator of current research activity and this also demonstrated a positive skew. However, it is recognised that these figures may also depend on the timing of the survey in terms of time in post for working on
papers (particularly for staff new to an academic post) and timing of the external national research assessments such as the REF.

The findings also indicated that those who identified themselves as ‘academic’ rather than ‘clinical’ in their programme role had a higher research output (in terms of mode values and ranges, which is consistent with the findings of Barclay (1964) that academic clinical psychologists produce more publications than clinician clinical psychologists. This is perhaps unsurprising, given that the production of research is central to the academic community of practice (Houston, Meyer, & Paewai, 2006). As a result, the academic environment encourages staff to access resources, such as those provided by the National Institute for Health Research (NIHR) and UK Clinical Research Collaboration (UKCRC).

While there is also an emphasis on the importance of research in health settings (e.g. Department of Health, 2006; 2008) clinicians may find it harder to access resources which support research in health settings, and promotion prospects may not be seen as being related to research output to the same extent as for academic staff (Schultz, Meade, & Khurana, 1989). Clinical psychology may also be disadvantaged as a profession because they lack an organisation which has the explicit aim of supporting clinical academics and promoting research. This contrast with other health professions such as medicine, dentistry (Fitzpatrick, 2010) and nursing (The Academy of Nursing, Midwifery and Health Visiting Research, 2011). Cooper & Turpin (2007) also note that while there have been initiatives to facilitate academic careers within nursing and medicine, through for example the creation of fellowships (e.g. UKCRC, 2011), there is a lack of similar initiatives for clinical psychology.

The results of the present study are, however, not clear cut. Many training programmes in Britain employ staff who are not necessarily clinical psychologists in an academic role; therefore not all respondents with an academic role in the present study are necessarily a true academic clinical group. Second, the clinical group were based in a
university and would therefore be expected to be exposed to some of the same factors that either facilitate or hinder research activity as their academic counterparts, so the clinical group are not necessarily the same as those solely employed in a health setting. Barclay (1964) argued that an academic environment would provide pressure to conduct research for psychologists in this setting. It would be hard to argue that this situation would be any different in a British university in the 21st century.

Satisfaction, expectations and role in promotion

Most of the academic respondents felt that promotion was dependent on all three research activities and that the number of publications and submissions was meeting the job requirements, though for many the number of grant applications made was felt not to meet these. Many of the academic respondents felt dissatisfied with their publications and submissions and over two thirds felt dissatisfied with the number of grant applications made. The number of research publications and grant applications was also not felt to be meeting personal expectations. Therefore, grant applications in particular seemed to be any area for many where expectations and satisfaction were not being met. While previous research has noted that the multiple demands on academic staff can be conflicting and competing (Jenkins, 2004) clinical psychology trainers may be particularly vulnerable to this because they not only belong to two separate professional communities of practice- academic and health- but they must also meet the needs of multiple stakeholders. As places on training programmes are commissioned by the NHS, there is a demand for high quality teaching that also meets the standards of accreditation bodies. Simultaneously, the universities require staff to be research active. As research activity was seen by many respondents as being related to promotion, this may have been one source of the dissatisfaction.
The fact that many respondents expressed dissatisfaction with their research output suggests that the role of researcher is considered to be an important part of both the identity of the individuals and the communities of practice to which they belong. There is, however, a danger that the role conflict which many trainers are likely to experience as clinical academics is inadvertently communicated to trainees, particularly as the informal rules and culture of a community of practice are transmitted along with the formal body of knowledge (Wenger, 2000). Previous research has indicated that one of the factors that influence trainee decisions to publish research is the enthusiasm of the supervisor (Cooper & Turpin, 2007). Supervisor dissatisfaction may lead trainees to feel ambivalent about undertaking research and may be one of the reasons why only a limited number of trainees undertake and publish research when they qualify (Milne, Keegan, Paxton & Seth, 2000).

For those with a clinical role, it might be expected that research activity would be a lesser part of the role, and the majority felt that their output met job requirements. Despite this, some respondents perceived promotion to depend on publications and submissions. Furthermore, satisfaction ratings were more inclined towards dissatisfied and neutral rather than satisfied. However, as there were so few people in this category, it is difficult to draw many conclusions.

The respondents differed overall in terms of research output, which would likely have influenced responses; however, overall there was a high frequency of the activities failing to meet one’s own expectations and satisfaction levels. This would indicate that for many of the respondents there is a personal drive (as well as external demands) for research activity, and that research activity is part of their professional identity. This is consistent with previous research with academic staff, which found that intrinsic motivators were more important to commitment to the job than extrinsic factors such as pay (McInnes, 2000). Of course for
those who expressed satisfaction and met expectations this could either indicate that research drive is fulfilled or that the person is not driven to increase this output.

Facilitators of and barriers to research activity

The open ended questions about barriers and facilitators to research activity highlighted several core themes. By far the most frequently cited barrier was time, which is consistent with some respondents’ comments that they had to work outside of working hours to do research. The two next most frequent barriers were lack of resources and lack of research support and culture. All these barriers have been cited as factors preventing research in practice in US clinical psychologists (Haynes et al., 1987) and are consistent with Holttum and Goble’s (2006) model of research activity. The research-active nurses in Tanner and Hale’s (2002) study reported that working in their own time was necessary for completing research. Since the present study was conducted with those in a university role, time might be expected to be less of an issue. However, university jobs are likely to involve balancing administrative, teaching and research tasks and the respondents’ comments indicated a perception that the university did not always recognise the demands of this specific type of training programme.

For facilitating research activity, support and collaboration with colleagues was most frequently cited, followed by organisational support, structure and culture, then personal motivation and supervision/support of trainees. It is likely that some of these factors are related, as a greater research culture within a workplace would be expected to promote collaboration. Interestingly, only 20 respondents listed support and collaboration with colleagues as a facilitator; however, this does not necessarily indicate that the others do not work in an environment where collaboration is not possible or promoted, as only six people cited a lack of collaboration as a barrier. Previous research has also indicated that support
and personal motivation form part of a research culture (Watson et al., 2005) and that both are important in terms of job satisfaction (Houston et al., 2006) and commitment (McInnes, 2000). However, the statements regarding personal motivation indicated that for some this translated into working extra hours and going beyond what was expected or could be achieved within normal working hours.

The study has highlighted that the number of publications within the group of clinical psychology trainers based at British universities was varied, but that many had no research publications since beginning the post. In addition, the research output failed to satisfy and meet expectations for many of the sample (though this was not the case for all). Respondent comments did not indicate an unwillingness or lack of desire to do research for most of the sample, indicating that this activity was considered by most to be part of the community of practice of this professional group, rather a lack of time and other demands of the training programme were substantial barriers. Since research skills are emphasised as such a core component of clinical psychology training, it seems incongruous that research should not continue to be supported for those involved in the training process. It may be that clinical psychology could benefit from the development of structures to support clinical academics, in line with those of other professions (e.g. Fitzpatrick, 2010) in order to ensure a consistent approach to facilitating research. Cooper & Turpin (2007) also provide a number of recommendations, which, while proposed in the context of increasing trainee clinical psychologists’ research output, are equally applicable to clinical psychology trainers. These include the need to ensure staff are research active in their own right, have adequate resources, and manageable supervisory loads. In addition, they highlight the need to create more opportunities for staff to enter academic careers including creating fellowships and for the NHS to recognise the value of research through promotion processes.
There were, however, some respondents who directly challenged the view that being a research-practitioner was a key part of the identity of clinical psychologists. Some respondents felt that research was of little value and questioned whether clinical psychology trainers should be doing research. Gelso (2006) has argued that the involvement of psychologists in research means that there is a greater likelihood of clinical practice being grounded in evidence. If research is not viewed as a necessary component of the profession then it undermines the importance of teaching and assessing research skills in clinical psychology trainees (a further discussion of the value of the scientist-practitioner model can be found in Long & Hollin, 1997).

**Limitations**

A number of limitations should be highlighted, in addition to those already discussed. First, the respondents represent a potentially biased sample of those who work for clinical psychology training programmes, in that those with strong views about barriers or facilitators may have been more likely to respond. Furthermore, it is unknown whether all training programme staff had been sent the link to the survey. Second, the participants were asked to list which factors were facilitators and barriers to research activity in general; however, it is possible that different factors contribute to different parts of the research process, from developing ideas, submitting and winning grant applications to writing up papers or presenting at conferences. Third, participants were asked to categorise their job title as clinical or academic due to the staff roles at the authors’ university. However, the additional job titles provided by respondents indicated that this was not a universal way of organising staff teams.

The present study sampled from those involved in training programmes and who were based at a university. The authors were assuming that this group would represent those who
wanted to further scholarly activity and who would be more research active, as reported by Agnew et al. (1995), particularly those with an academic rather than a clinical role. This group may only represent one section of the community of practice of clinical psychology, as only a limited number of the profession hold an educational role. In order to further explore the extent to which the identity of ‘research practitioner’ is modelled to trainees in practice, it would be necessary to study the research activity of those involved in clinical psychology within the health setting (i.e. placement supervisors, line managers). Arguably, the modelling of research activity in this setting could be more influential on trainee clinical psychologists who go on to work full time in a health setting.

In conclusion, the present study found wide variation in the research activity of those employed on clinical psychology training courses, with many having limited or no publications while a smaller proportion had many. Overall, respondents were as or more dissatisfied than satisfied with publications, submissions and grant applications and over half felt that their productivity in relation to the grant applications failed to meet their expectations. Support from and collaboration with colleagues was the main facilitator for research, while a lack of time was viewed as the main barrier.
References


Last accessed 12th May, 2011.


Table 1

*Mode, median, and range for the different research indicators since starting current training post for all respondents and academic and clinical roles separately*

<table>
<thead>
<tr>
<th></th>
<th>Academic</th>
<th>Clinical (n=13)</th>
<th>Total Sample (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research publications</strong></td>
<td>3, 6, 0-68 (n=37)</td>
<td>0, 0, 0-9</td>
<td>0, 3, 0-68 (n=60)</td>
</tr>
<tr>
<td><strong>Submitted publications</strong></td>
<td>2, 2, 0-14 (n=37)</td>
<td>0, 0, 0-1</td>
<td>0, 1, 0-14 (n=60)</td>
</tr>
<tr>
<td><strong>Research grant applications made</strong></td>
<td>1, 2, 0-28 (n=36)</td>
<td>0, 0, all 0</td>
<td>0, 1, 0-28 (n=59)</td>
</tr>
<tr>
<td><strong>Research grants awarded</strong></td>
<td>0, .5, 0-19 (n=36)</td>
<td>0, 0, all 0</td>
<td>0, 0, 0-19 (n=59)</td>
</tr>
</tbody>
</table>
Table 2

*Ratings of satisfaction with number of publications, current submissions and grant applications, perceived extent to which these meet job requirements and own expectations and perceived extent to which promotion depends on these*

<table>
<thead>
<tr>
<th></th>
<th>Academic</th>
<th>Clinical</th>
</tr>
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<tr>
<td><strong>Publications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publications Satisfaction</td>
<td>Dissatisfied</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Satisfied</td>
<td>15 (n=38)</td>
</tr>
<tr>
<td>Job requirements</td>
<td>Fails to meet</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Meets</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Exceeds</td>
<td>10 (n=38)</td>
</tr>
<tr>
<td>Own expectations</td>
<td>Fails to meet</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Meets</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Exceeds</td>
<td>2 (n=38)</td>
</tr>
<tr>
<td>Promotion</td>
<td>Not at all</td>
<td>7</td>
</tr>
<tr>
<td>depends on it</td>
<td>Some extent</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Large extent</td>
<td>23 (n=37)</td>
</tr>
<tr>
<td><strong>Submissions</strong></td>
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<td></td>
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<tr>
<td>Submissions Satisfaction</td>
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<td>13</td>
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<tr>
<td></td>
<td>Neutral</td>
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<tr>
<td></td>
<td>Satisfied</td>
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<td>Fails to meet</td>
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<td>Category</td>
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<tr>
<td>Promotion</td>
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<td>Satisfaction</td>
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<tr>
<td>Dissatisfied</td>
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<td>1</td>
</tr>
<tr>
<td>Neutral</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Satisfied</td>
<td>4 ((n=37))</td>
<td>2 ((n=11))</td>
</tr>
<tr>
<td>Job requirements</td>
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<td>Fails to meet</td>
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<td>0</td>
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<tr>
<td>Meets</td>
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<td>11</td>
</tr>
<tr>
<td>Exceeds</td>
<td>6 ((n=37))</td>
<td>0 ((n=11))</td>
</tr>
<tr>
<td>Own expectations</td>
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<td></td>
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<tr>
<td>Fails to meet</td>
<td>28</td>
<td>2</td>
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<tr>
<td>Meets</td>
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<tr>
<td>Exceeds</td>
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<td>0 ((n=11))</td>
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<tr>
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<td>depends on it</td>
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<tr>
<td>Not at all</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Some extent</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Large extent</td>
<td>19 ((n=37))</td>
<td>1 ((n=11))</td>
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</table>
### Table 3

*Themes for facilitators and barriers to research activity, with number of statements relating to each theme and example statements shown*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Facilitators</th>
<th>Barriers</th>
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<td>and culture</td>
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