

## **Professorial roles: a study of the professorial populations within nursing and midwifery, social work and allied health professions.**

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### **Abstract**

The professorial populations in nursing/midwifery, social work and allied health are relatively new in academia compared to longer established professions such as medicine and dentistry. Less is known about the roles, career pathways, characteristics and career aspirations of the professoriate within these emerging professions.

A survey was undertaken from sample populations in each of the three professorial groups in order to obtain qualitative and quantitative data on professorial roles and activities, career pathway information and support mechanisms for professorial positions. This paper discusses the findings of the survey which relate specifically to professorial roles and activities and whether the identified roles reflect the professorial activities proposed by the National Conference of University Professors (NCUP)

Other aspects of this survey including career pathways, findings relating to gender and support mechanisms will form the basis of future papers.

### **Results**

The findings suggest that the professorial roles studied in this survey reflect those described by the National Conference of University Professors.

Professors of nursing, allied health professions and social work balance a wide range of roles and activities. Research, and related activities, as one would expect, constitute a substantial aspect of work activity but many professors express frustration with an environment which requires an heterogeneous role profile combined with an unrealistically high workload in order to successfully pursue their research careers.

The survey highlighted support networks as a critical success factor in terms of professorial career development. However, professors from across the disciplines commented on the lack of support (institutional and external) available to professors both pre- professorial and professorial grades.

Established and personal chair holders appear to have similar roles with few statistically significant differences found between these two sub-populations.

**Key words**  
**Professorial roles, Nursing and Midwifery,**  
**Social Work, Allied Health Professions**

**Introduction**

Professors in the United Kingdom, within nursing and midwifery, allied health professions and social work hold influential positions as academic/clinical academic researchers and leaders and role models within their respective professions (Watson and Thompson, 2004).

However, they do not always embark upon and plan a definitive career route which would direct them towards clinical/academic research leadership. Serendipity rather than pre-meditated career planning appears to be the norm in terms of career pathway trajectory (Jackson and Butterworth, 2007), (Turner, 2007).

Leaving career planning to serendipity, one could argue, may not be the most appropriate method of identifying and developing our future clinical academic research leaders. Furthermore as Bamberg et al suggest for allied health professions, failure to properly engage in actively securing research leadership succession could have a detrimental impact on our professions and the educational programmes from which our future leaders will emerge (Bamberg et al, 2000).

It is timely therefore to examine more carefully, the roles and activities undertaken and the support received by the professoriate during their research careers in order to develop targeted support mechanisms to assist the professions in developing strategies to support aspiring research leaders of the future.

**The role of the professoriate and the National Conference of University Professors**

Rolfe (2007) suggested that the primary role of professors of nursing is to enable, facilitate and support practising nurses to set their own educational, research and practice agenda. This is to encourage closer and more collaborative links between clinical practice and academia and between disciplines. This approach is supported by the United Kingdom Clinical Research Collaboration (UKCRC, 2007) in its report of the UKCRC Subcommittee for nurses in Clinical Research (Workforce). This report although relating its recommendations primarily to the nursing profession acknowledges the applicability to the allied health professions. In an earlier study, Butterworth et al, in 2005 suggests that supporting future generations of all healthcare professionals by developing clinical practice alongside scholarly activities in research and education is becoming an important modus operandi for the healthcare workforce. The National Conference of University Professors (NCUP) is an organisation which aims to support all university professors to carry out their special responsibilities in terms of maintaining academic standards (NCUP, 2009)

The role of the professoriate was reviewed by the National Conference of University Professors (NCUP, 1991)). This multi disciplinary Conference published through its Policy Document no.2, the NCUP identifies 8 key roles attributable to the role of a University professor.

- Established and Personal Chairs

Professors are appointed to *Established Chairs* to provide leadership in their subject of specialisation and they are expected to play an organisational role. *Personal Chairs* are elected on the strength of national/international distinction in their field of scholarship which at local level provides for an identified stream of research within a department

- Academic Standing

Professors should have outstanding authority in their field.

- Research and Scholarship

Professors should be expected to maintain individual and authoritative industry in scholarship and research and by example encourage other staff in their subject to engage in original work.

- Teaching

Professors' scholarly activities should be reflected in U/G course development, PG seminars and research training

- Acquisition of resources

Organisation of physical, IT and human resources to support professorial subject area

- Powers of communication

Professors should demonstrate cogent expression through spoken and written communication skills and be able to defend their judgements effectively

- Services to the Wider University Community

Professors should be prepared to undertake committee work, become members of review groups and be active in its Senate (or equivalent) thus making a vital contribution to the *esprit de corps* of the academic community

- Services Outside the University

Professors should play a role in the external community through such functions as external scholarly activity, sitting on local and national boards and consultancy work.

The foregoing statements represent a heterogeneous set of activities which are grounded in the principles of academic tradition. There is an expectation that professoriate will, in fulfilling these roles, be able to support and advance their individual professional fields of interest as well as contributing to the scholarly life of the University.

### **Research design, method and analysis**

The primary objective of this study is to discover whether the professorial population across nursing, allied health professions and social work reflect the functions and roles defined by the National Conference of University Professors.

It was felt that the most appropriate instrument for this study was to survey a self-selected sample population identified from a database of potential responders. The sample population was required to complete the survey using a self administered questionnaire.

The population is defined as professors of nursing, allied health professions (relating to the Health Professions Council) and social work. These academic disciplines have, in the main, provided undergraduate pre- registration degree programmes within higher education during the last two decades. Allied Health Professions began pre registration degree programmes during the

1990's, the majority of degree programmes in nursing followed shortly after this time and pre-registration degree programmes in social work have developed during the past few years.

These professional disciplines therefore do not have a comparable academic history with more established disciplines (such as medicine) and there is a paucity of published workforce data available around academic leaders within these disciplines. This lack of data was an influencing factor in forming the rationale for this study.

### **Ethical approval**

Ethical approval was granted for this study by the host research team's University Ethics Committee.

### **Survey protocol: Establishing a preliminary data base**

To complete this survey, a database of possible professors in the targeted disciplines had to be established.

All UK Universities with undergraduate or postgraduate programmes in nursing, allied health professions and social work had their web sites interrogated for relevant professorial positions.

Table 1 shows the sampling frame and numbers of professorial posts included in the preliminary database. It should be noted however that there were difficulties in clearly identifying some professors by professional discipline through professorial titles alone and further identifiers, such as professional qualifications were utilised following preliminary analysis of the questionnaires.

*Insert table 1 here*

### **Developing the questionnaire**

The questionnaire was designed to elicit both qualitative and quantitative data based on the roles outlined by the National Conference of University Professors (1991) and adapted to reflect health care professionals. The questionnaire was constructed so that information could be obtained on the following data sets

Quantitative information on:

- Personal information (including age, gender)
- Information on current appointment- including title, whole time equivalence, funding, salary range, type of appointment
- Time spent on professorial role activities
- Amount of administrative support
- Types pre- and post- appointment support/ career development received
- Professional status, qualifications and membership of bodies/networks

Qualitative information on

- Comments on selection process for the post
- Comments on administrative support
- Comments on pre- and post- appointment support/ career development received
- Open-ended questions on barriers to professorial posts

- Open-ended questions on major issues for professors
- Questions on factors that professors felt were important in gaining their posts

The questionnaire was piloted prior to distribution in the host institution. Additional questions relating to administrative support were added to the final questionnaire.

The questionnaire was initially distributed electronically using the preliminary database information. The purpose of the census-style approach was to attempt to identify more clearly (using response data) those professors who were within the identified professional groups. It was anticipated therefore that the analysis of data would be carried out on a reduced sample (accounting for non- responders and cleaning of the sample)

An e- link was provided to allow participants to respond electronically. Participants could also email to get a printable word version.

An email introducing the survey and purpose was sent with the questionnaire. A further email or postal reminder was sent out six weeks after the invitation to participate to non responders.

### **Response data**

A preliminary review of each response enabled the researchers to more clearly identify those professors who had qualified as nurses, allied health professionals (as defined by the Health Professions Council) and social workers. These populations were included in the analysis.

Table 2 shows the final sample for the survey by professional discipline. The mean response from the distributed questionnaires (following review and cleaning of the sample) was 27.8%. Nursing and midwifery responses (n=53) represented the highest percentage within the sample (32.9%), allied health professions (25.4%) and social work (19.7%).

It is difficult to provide accurate figures with respect to responses relative to the true total populations of these disciplines. Centralised data intelligence on professorial posts is not available for allied health professions. Professors of Social Work have a member organisation (Association of Professors of Social Work) with a mailing list of 102 which, according to Moriarty (2009) contains emeriti professors as well as established and personal chairs. The Royal College of Nursing collects data on professorial position within nursing, but it is clear from the web sites of academic departments that there are professors with a nursing qualification working in disciplines which are not related to nursing.

### **Data analysis**

Qualitative data were analysed using NVivo 7 (QSR) software which allowed for detailed single case analysis, numeric summary information and emergent interpretative summaries using responses from the open ended questions and comments sections of the questionnaire.

Quantitative data were analysed using SPSS 14.0 for Windows (Statistical Package for the Social Sciences) and principal component analysis (PCA) was used for exploratory data analysis. PCA is a mathematical procedure

that transforms a number of possibly correlated variables into a smaller number of uncorrelated variables called principal components. The first principal component accounts for as much of the variability in the data as possible, and each succeeding component accounts for as much of the remaining variability as possible (Jackson, 1992). Only Eigenvalues greater than one were used in the analysis. The components were rotated using the Varimax method with Kaiser Normalization.

Descriptive and inferential statistics enabled detailed analyses of a number of variables. This article presents findings mainly using data for professional grouping, professorial roles and type of appointment.

### **Summary findings: Demographic characteristics**

Table 3 shows demographic characteristics of the sample populations by professional group.

*Insert table 3 here*

Professors in all three professions had a mean age above 50 years. Professors in the allied health professions were the youngest group with the shortest time in post. Social workers had the highest mean age. This was significant ( $t(22) = -2.425$ ;  $p=0.024$ ) when comparing social work professors ( $M=58.45$ ;  $SD=9.97$ ) with the allied health professions ( $M=50.85$ ;  $SD=4.96$ ). This is not unexpected as academic departments in social policy and social work have been in existence for longer than academic departments in nursing and allied health professions.

With respect to the gender balance within each of the three professions, there are data relating to female to male ratios for the nursing profession only. Statistical data from the Nursing and Midwifery Council (2008) shows a female to male ratio of 9:1 for the registered population. The data from this survey would suggest that male professors are over-represented in this population (F: M ratio 3.7:1) compared to the registered population. These results must be interpreted with some caution due to the small sample size relative to the full survey population.

However, Jackson (2008) reported that in an analysis of data provided by HESA (Higher Education Statistics Agency) nurses studying for doctoral qualifications showed a female to male ratio of 4:1. This suggests that a greater percentage of male nurses are pursuing higher level qualifications compared to female nurses which is then continued through into academic leadership positions.

### **Summary findings: Key roles of the professorial populations**

#### **i) Professorial roles and scholarly activities**

All participants in this study carried out a wide range of internal (to the employing university) and external activities as part of their roles. The NCUP expect professors to offer services to the wider university community and services outside the university.

Professors undertook research, research related duties (such as funding, supervision and supporting research assessment), teaching and general

managerial and committee responsibilities. This range of roles identified in this survey reflects the guidelines set out by the NCUP and is now discussed in more detail here.

Table 4 shows the breakdown of professorial roles and activities by profession.

*Insert table 4 here*

For the majority of the variables shown in table 4, no significant differences were found between the professional groups. There was however, a difference noted with respect to research supervision.

### **ii) Research supervision**

A univariate ANOVA was conducted for the factors 'time spent on internal research supervision' and 'professional group' (nurses and midwives v. AHPs v. social workers). The results demonstrated a significant difference between the amount of time that the three professions spend on internal (to the institution) research supervision ( $F(2, 68) = 5.018$ ;  $p = 0.009$ ). Tukey post hoc tests showed that there was a significant differences between nurses ( $M=15.89$ ;  $SD=8.32$ ) and social workers ( $M=7.93$ ;  $SD=10.99$ ) with nurses spending more time in internal research supervision when compared to social workers, ( $p = 0.015$ ), no difference between nurses and AHPs ( $p = 0.139$ ) and no difference between AHPs ( $M=10$ ;  $SD=9.75$ ) and social workers ( $p = 0.839$ ). The results thus show that nurses and midwives spend significantly more time undertaking internal research supervision when compared to social workers, the difference is not significant between nurses and midwives and AHPs and there is no difference between AHPs and social workers.

### **iii) Balance and relationship between research, teaching and management activities**

Analysis of the data around the relationship and balance of activities was undertaken using a principal components analysis and the results are presented by professional group.

#### **Professors in nursing and midwifery**

*Insert tables 5.a and 5b here*

##### **Component 1 Academic Research**

Academic research, research funding activities and general management are complementary activities for nurses and midwives. These activities are carried out at the expense of clinical research. This is supported by the qualitative analysis which indicates that nurses and midwives are frustrated by the competing demands on their time which limits opportunity to develop clinical research.

##### **Component 2 Research Assessment Exercise (RAE) and Research Supervision**

These roles appear to be complementary activities and once again, clinical research opportunities are compromised.

Component 3            RAE activities

Professors carry out RAE related activities at the expense of teaching.

### **Professors of Social Work**

*Insert table 6a and 6b here*

Component 1            Teaching and research

Time spent in academic research is inversely proportional to both research funding and teaching activities. This would suggest there is a conflict between the short term deadlines seen with teaching and research funding compared with the demands of longer term activities such as academic research. This effect is supported by the qualitative responses from this group.

Component 2            Research supervision and to a lesser extent, RAE and research funding activities are carried out in preference to clinical research.

Component 3            Management activities

This component suggests that management appears to be neglected in favour of academic research

Component 4            Clinical research and RAE activities are complementary (mild effect)

### **Professors in Allied Health Professions**

*Insert tables 7a and 7b here.*

Component 1            RAE activities and research supervision

These roles are complementary activities for AHPs and are prioritised over teaching.

The tension between RAE activities and teaching was clearly identified by professors in Allied Health Professions from the free text comments within the questionnaire. One AHP professor stated that the RAE had 'a poisonous impact' on professorial roles.

Component 2            Research funding and clinical research

These two activities are complementary and are carried out at the expense of management activities.

Component 3            Research

Academic research and clinical research are competing elements of the professorial role.

### **Balancing professorial roles- further discussion**

Analysis of the qualitative responses in relation to roles and activities revealed that managing the diverse activities which encompass a professorial role was a major issue across all three professions. Research was highlighted as the most important role but delivery of this was compromised by other responsibilities.

Balancing research and teaching was a major concern for the majority of responders and there was clear dissonance between expectations of senior managers wishing to boost the university research profile and staff with responsibilities for delivering on the teaching agenda. Professors appear to be caught in the middle of the teaching-research dilemma. This dilemma was noted by Sparkes (2007) in his fictionalised ethnographical reflections of professorial roles in academia within a growing and pervasive audit culture. His insightful depiction of university professors attempting to balance managerial expectations relating to research outputs and income generation with the competing pressures of professorial roles has congruence with the findings of this study.

#### **iv) Academic standing**

The NCUP expects professors to have outstanding authority in the field. Evidence relating to this aspect of the professorial role was identified through a question which sought qualitative responses relating to success factors. Professors were asked to provide a personal view on factors which they considered were vital to a successful professorial position. The factors were analysed, coded and categorised and the following three categories emerged from the data.

##### **a) National/international reputation within their peer community**

Professors included here examples such as research success with high quality publications, profile as a visionary clinical research leader and excellence in teaching. This supports the expectations around academic standing stated by the NCUP. The importance of developing international links was highlighted as a factor for successful professorial appointments. Professional organisations are developing European and international platforms, enabling early career researchers to obtain research data and develop research networks. For example, Workgroups of European Nurse Researchers (WENR) provides details of current conferences and demographic data in nursing, which in a 2005 census, included data by country on relevant research contacts, numbers of doctoral students and professors of nursing.

##### **b) Personal characteristics**

Professors identified hard work (including excessive hours), a passion for the job and commitment to the subject area, perseverance and determination. Several female professors commented that their success was linked to their decision not to take a career break when becoming a parent.

A study by the British Medical Association (2004) suggested that female doctors who took career breaks to have children were at a disadvantage in

terms of career promotion because of the traditional time- related positioning on the promotional spectrum.

### **c) Support networks**

Professors expressed impassioned views on the importance of effective support to success and resultant academic standing. This included both institutional and peer support networks.

Receiving high quality supervision to develop research leadership skills and mentorship to assist with career pathway decisions were felt to be important contributory factors in developing a successful professorial career.

The support was more prevalent in pre- professorial positions than it was post appointment and a number of recently appointed professors expressed a wish for more continued support during the early phase of the post.

It was noted that whilst there was a strong consensus on this factors for success, almost half of the population stated that in their view the support they received was ad hoc, self-determined, too informal or non-existent.

Both male and female professors commented that partner support was important.

Recent post doctorate training initiatives such as the Clinical Lectureship competition (2010) for nurses, midwives and allied health professions, sponsored by the National Institute for Health Research (NIHR) will provide additional and welcome support for aspiring research leaders in these professions. However, it is worth reiterating that early career professors wish to additional and extended support provided in order to support their career and roles.

### **v) Acquisition of resources**

*Insert table 8 here*

NCUP refer to human resources to support professorial subject areas and the survey produced data relating to administrative support and research capacity through the use of research assistants.

In terms of administrative support, the results seen in table 8 shows inter professional variability. Holding a further position such as Head of School or Dean will act as a confounding variable and as such, the results should be treated with some caution. Nevertheless, it is clear that lack of administrative support was a source of contention amongst this population and in addition there are significant differences between the professions.

A univariate ANOVA was conducted for the factors 'amount of administrative support' and 'professional group' (nurses/midwives v. AHPs v. social workers). The results demonstrated a significant difference between the three professional groups for the amount of administrative support that they receive ( $F(2, 80) = 6.529$ ;  $p = 0.002$ ). Tukey post hoc tests showed that there was a significant difference between nurses and AHPs ( $p = 0.028$ ), a significant differences between nurses/midwives and social workers ( $p = 0.009$ ) and no difference between AHPs and social workers ( $p = 0.986$ ). The results thus show that nurses have significantly more administrative support than the other

two professional groups while AHPs and social workers do not differ from each other in the amount of support that they receive.

Professors across all three professions suggest that research capacity development is currently problematic, citing a number of contributory factors. The lack of suitably qualified senior lecturers and post-doctoral staff compromises the ability to maintain a critical mass within departments and many commented on the lack of discipline – specific research assistants.

#### **vi) Established and personal chairs**

The NCUP identifies clear and different roles for established (competitive) and personal chairs.

This study found only a few significant differences between competitive and personal professorial positions with differences relating to the percentage time spent in internal funding activities and percentage time spent on external management- related duties.

##### **General characteristics**

Independent t-tests exploring the theoretically interesting differences between the experiences of established appointments compared to personal appointments revealed no differences based on gender between the two groups, age profile, length of time since appointment or the amount of administrative support received.

##### **Academic research**

With respect to the amount of time spent in research (clinical and academic) there were no significant differences between the two sub-populations.

##### **Management activities**

There was a significant difference between the two groups on the amount of time spent on external managerial activities ( $t(49.63) = 2.627$ ;  $p = 0.011$ ) with established chairs ( $M = 2.4$ ;  $SD = 6.25$ ) spending more time on this type of activity than personal chairs ( $M = 0.07$ ,  $SD = 0.38$ ). This might suggest that established chairs do exhibit a stronger external profile, thus supporting the NCUP guidelines.

##### **Research supervision and teaching activities**

There were no significant differences found.

##### **Research funding activities**

There was a significant difference between the two sub-populations for the amount of time that they spent on internal research funding activities ( $t(76) = 2.396$ ;  $p = 0.019$ ) with established chairs spending longer on these activities. No significant differences were found between the two groups for the amount of time spent on external funding activities or for overall funding activities. There were no significant differences between the two groups for the amount of time spent in research assessment exercise activities.

**Summary: established and personal chairs**

The above results taken as a whole would suggest that the two sub-populations of established and personal chairs have very similar professorial roles but established chairs demonstrate a stronger external profile.

**Discussion and conclusions**

The survey identified that the roles and activities undertaken professors in nursing and midwifery, allied health professions and social work closely align with the key roles identified through the NCUP.

Professors in these professions undertake a wide variety of roles both within and external to, their employing universities. Balancing the roles associated with a professorial position together with the expectations and pressures brought about by the current audit culture is identified as a major source of tension for this population. Professors have clearly articulated a desire to receive better, more targeted and sustainable support from their institutions and their peer networks through improved mentorship arrangements and better career pathway guidance. This support appears necessary, not only for aspiring professors and those in the early part of their professorial careers but also for professors in more established posts.

Tables

**Table 1** the sampling frame: professors included in the preliminary database according to discipline

<b>Discipline</b>	<b>Number included on the database</b>
Unclassified <sup>1</sup>	2
Allied Health Professions	55
Nursing and midwifery	161
Social Work	86
Psychology <sup>2</sup>	22
<b>Total</b>	<b>326</b>

**Table 2** Number of responses analysed by profession

<b>Profession</b>	<b>Number of responses analysed</b>	<b>Number of questionnaires distributed</b>
Nursing/Midwifery	53	161
Allied Health	14	55
Social Work	17	86

**Table 3** Demographic characteristics of the populations

<b>Nursing and midwifery</b>	<b>Female</b>	<b>Male</b>
Mean age	52.95	53.40
Mean time in present post	6.07	6.27
Mean time as a professor	7.08	6.40
Mean salary	£50,001- £55,000	£55,001 - £60,000
Type of appointment	Competitive = 27 Personal chair = 11 Other = 1	Competitive = 10 Personal chair = 0 Other = 1
NCUP member	Frequent attendance = 3	Frequent attendance = 0

<sup>1</sup> Working in a relevant department, but unsure of discipline

<sup>2</sup> Initial inclusion of some psychology professors based on nursing related activities

	Occasionally = 3 Rarely = 1 Never = 34	Occasionally = 0 Rarely = 0 Never = 11
<b>Social work</b>		
Mean age	55	60.43
Mean time in present post	4.57	7.44
Mean time as a professor	4.71	11.88
Mean salary	£50,001 - £55,000	£55,001- £60,000
Type of appointment	Competitive = 5 Personal Chair = 4	Competitive = 3 Personal Chair = 2
NCUP member	Frequently = 1 Occasionally = 1 Never = 7	Frequently = 0 Occasionally = 1 Never = 4
<b>Allied Health Professions</b>		
Mean age	51.22	50
Mean time in present post	3.67	4.60
Mean time as a professor	3.89	5
Mean salary	£45,001 - £50,000	£50,001 - £55,000
Type of appointment	Competitive applications = 5 Personal chair = 4	Competitive applications = 3 Personal chair = 2
NCUP member	Frequent attendance = 1 Occasionally = 1 Never = 7	Frequent attendance = 0 Occasionally = 1 Never = 4

**Table 4 Professorial roles and activities by profession**

% time	Nursing and midwifery	Social work	Allied Health Professions
academic research	Internal <b>20.93</b> External <b>3.91</b> Overall <b>24.63</b>	Internal <b>28.43</b> External <b>4.21</b> Overall <b>32.64</b>	Internal <b>9.09</b> External <b>4.09</b> Overall <b>13.18</b>
clinical research	Internal <b>9.35</b> External <b>3.76</b> Overall <b>12.24</b>	Internal <b>3.5</b> External <b>0.64</b> Overall <b>4.14</b>	Internal <b>12.27</b> External <b>5</b> Overall <b>17.27</b>
research funding	Internal <b>8.47</b> External <b>0.98</b> Overall <b>6.48</b>	Internal <b>5.43</b> External <b>4.64</b> Overall <b>7.5</b>	Internal <b>5.91</b> External <b>4</b> Overall <b>9.55</b>
RAE activities	Internal <b>10.28</b>	Internal <b>6.14</b>	Internal <b>6</b>

	External <b>0.78</b> Overall <b>11.04</b>	External <b>0.36</b> Overall <b>6.14</b>	External <b>0</b> Overall <b>6</b>
research supervision	Internal <b>15.89</b> External <b>0.7</b> Overall <b>16.59</b>	Internal <b>7.23</b> External <b>0.86</b> Overall <b>7.93</b>	Internal <b>10</b> External <b>0.91</b> Overall <b>10.91</b>
teaching	Internal <b>7.24</b> External <b>0.33</b> Overall <b>7.57</b>	Internal <b>13.21</b> External <b>2.86</b> Overall <b>16.07</b>	Internal <b>21</b> External <b>0.55</b> Overall <b>21.55</b>
teaching related	Internal <b>2.96</b> External <b>0.11</b> Overall <b>3.07</b>	Internal <b>3.93</b> External <b>0.3</b> Overall <b>4.29</b>	Internal <b>6.91</b> External <b>1</b> Overall <b>7.91</b>
general management	Internal <b>9.35</b> External <b>0.65</b> Overall <b>10</b>	Internal <b>17.86</b> External <b>0</b> Overall <b>17.86</b>	Internal <b>11.82</b> External <b>0</b> Overall <b>11.82</b>

**Table 5a**

(See below on landscape pages)

**Table 5b Rotated Component Matrix for Nurses and Midwives**

	Component		
	1	2	3
% time in academic research	<b>.691</b>	.011	.086
% time in clinical research	<b>-.565</b>	<b>-.742</b>	.128
% time in research funding activities	<b>.601</b>	-.357	.146
% time in RAE activities	-.089	<b>.540</b>	<b>.677</b>
% time in research supervision	-.081	<b>.641</b>	7.72E-005
% time in teaching	-.148	.220	<b>-.887</b>
% time in general management	<b>.534</b>	.092	-.041

**Table 6 a**

(See landscape pages

**Table 6b Rotated Component Matrix of Social Workers**

**Rotated Component Matrix for Social workers**

	Component			
	1	2	3	4
% time in academic research	<b>-.867</b>	-.070	<b>.305</b>	-.192
% time in clinical research	.184	<b>-.389</b>	.169	<b>.778</b>
% time in research funding activities	<b>.745</b>	.313	.243	-.093
% time in RAE activities	-.202	.322	-.187	<b>.746</b>
% time in research supervision	.091	<b>.910</b>	.186	-.004
% time in teaching	<b>.828</b>	-.332	.293	-.173
% time in general management	-.066	-.166	<b>-.956</b>	.006

**Table 7a**

(See below on landscape pages)

**Table 7 b Rotated Component Matrix for Allied Health Professions**

	Component		
	1	2	3
% time in academic research	.188	.031	<b>.915</b>
% time in clinical research	.424	<b>.579</b>	<b>-.534</b>
% time in research funding activities	.194	<b>.715</b>	.467
% time in RAE activities	<b>.788</b>	-.126	.273
% time in research supervision	<b>.780</b>	.317	-.171
% time in teaching	<b>-.935</b>	-.211	-.144
% time in general management	-.033	<b>-.867</b>	.107

**Table 8 Acquisition of resources; administrative support**

	<b>Nursing and midwifery</b>	<b>Social work</b>	<b>Allied Health Professions</b>
Full time PA	7	0	2
Part time PA	18	2	2
Shared PA	14	5	1
Part time PA	4	2	1
No administrative support	9	8	8

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**Table 5a**

**Total Variance Explained Nurses and Midwives**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.625	23.212	23.212	1.625	23.212	23.212	1.480	21.138	21.138
2	1.362	19.463	42.675	1.362	19.463	42.675	1.437	20.527	41.666
3	1.222	17.451	60.126	1.222	17.451	60.126	1.292	18.460	60.126
4	.999	14.273	74.399						
5	.935	13.357	87.756						
6	.685	9.779	97.535						
7	.173	2.465	100.000						

**Table 6a**  
**Total Variance Explained for Social workers**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.193	31.332	31.332	2.193	31.332	31.332	2.080	29.716	29.716
2	1.450	20.711	52.042	1.450	20.711	52.042	1.324	18.919	48.635
3	1.238	17.681	69.723	1.238	17.681	69.723	1.250	17.852	66.488
4	1.011	14.440	84.164	1.011	14.440	84.164	1.237	17.676	84.164
5	.623	8.897	93.061						
6	.440	6.289	99.349						
7	.046	.651	100.000						

**Table 7a**  
**Total Variance Explained for Allied Health Professionals**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.896	41.365	41.365	2.896	41.365	41.365	2.358	33.685	33.685
2	1.595	22.786	64.151	1.595	22.786	64.151	1.759	25.133	58.818
3	1.103	15.758	79.910	1.103	15.758	79.910	1.476	21.091	79.910
4	.593	8.467	88.377						
5	.491	7.020	95.397						
6	.300	4.279	99.676						
7	.023	.324	100.000						