Welcome to the 4th Annual Doctoral Research Conference at the School of Health Sciences

Doctoral research is one of the most taxing and yet rewarding activities anyone undertakes in their academic career. This will be the fourth year of the School of Health Sciences Doctoral Research Conference. It is designed to provide an opportunity for our MPhil and PhD students to learn and practise the art of dissemination. The conference also aims to facilitate the exchange of research ideas between students, staff members and external partners.

Many research studies by our MPhil and PhD students have the potential to make a significant impact on policy and professional practice. This will contribute to our significant achievement in the Research Excellence Framework (REF 2014) where 100% of the School’s research impact was judged as world leading or internationally excellent.

It is clear from the range and depth of work presented that our doctoral students play an important role in building a research community within the School and help to strengthen our links with the health professions and sector industries. Our students are therefore key to the School’s research reputation and impact.

Professor Stanton Newman
Dean, School of Health Sciences, City University London

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<td>9.45 - 10.00</td>
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<td>Opening address from Professor Stanton Newman, Dean of the School of Health Sciences.</td>
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<td>3.00 - 3.15</td>
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# Schedule for oral presentations

## Session 1 - Oral presentations

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<tr>
<td>10.15</td>
<td>Location: Northampton Suite B Chair: Dr Charitini Stavropoulou</td>
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<tr>
<td>10.15</td>
<td>ALJAFFARY, Afnan: Exploring Public attitudes towards the health system of Saudi Arabia: Preliminary results of focus groups discussion</td>
<td>BERNARDI, Marialivia: Executive Functioning in Children with Developmental Coordination Disorder and Motor Difficulties: a 2-Year Longitudinal Study</td>
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<td>10.35</td>
<td>BISTARAKI, Angie: Interagency collaboration among public health and safety providers in the 2012 London Olympic Games: perspectives on leadership</td>
<td>LOWE, Hilary: Vocabulary intervention in adolescents with language difficulties</td>
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<td>10.55</td>
<td>SEKHON, Mandeep: Application of a theoretical framework to assess intervention acceptability: A semi - structured interview study</td>
<td>CAIN, Helen M: Do Babies at High Risk of Communication Disorders Differ from Low-Risk Babies?</td>
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## Session 2 - Oral presentations

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<tr>
<td>11.45</td>
<td>Location: Northampton Suite B Chair: Dr Julia Jones</td>
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<td>11.45</td>
<td>BEKAERT, Sarah: Teenaged pregnancy: losing a pregnancy, an incentive toward rapid repeat pregnancy?</td>
<td>MOSS, Becky: Using assistive technologies to compensate for writing and reading deficits for people after stroke</td>
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<td>12.05</td>
<td>FAULKNER, Alison: The role and value of experiential knowledge in mental health research</td>
<td>TAYLOR, Deanna: Searching for objects in everyday scenes and recognising faces: measuring performance in people with dry age-related macular degeneration (AMD)</td>
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## Session 3 - Oral presentations

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<tr>
<td>1.45</td>
<td>Location: Northampton Suite B Chair: Professor Christine McCourt</td>
<td>Location: Northampton Suite A Chair: Dr Ellinor Olander</td>
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<td>1.45</td>
<td>AHMED, Nafiso: The Development and Evaluation of a Novel Intervention to Increase Shared Decision Making in Risk Assessment and Management with People with Severe Mental Illness</td>
<td>AQUINO, Maria Raisa Jessica: Factors for successful collaboration between midwives and health visitors: Findings from a systematic review</td>
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<td>2.05</td>
<td>DELICATE, Amy: A review and meta-synthesis of the impact of traumatic childbirth on couples’ relationships</td>
<td>COELHO DE MELO, Juliana Almeida: Nuclear Medicine Nurse in Brazil: an occupational health study</td>
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<td>2.25</td>
<td>DIKMEN YILDIZ, Pelin: The prevalence of posttraumatic stress disorder in pregnancy and after birth: A systematic review</td>
<td>ROPER, Abi: Learning communicative gestures – the effects of a computer supported therapy for severe aphasia</td>
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AHMED Nafiso

The Development and Evaluation of a Novel Intervention to Increase Shared Decision Making in Risk Assessment and Management with People with Severe Mental Illness.

Introduction: Risk assessment (RA) and risk management (RM) are essential components in the delivery of mental health services. Policy directives highlight the need for mental health professionals to continuously identify and manage the potential risk of harm to service users, staff and the public. Promoting recovery is also a key priority for mental health services and guidelines recommend for shared decision making (SDM) to be implemented in each step of the RA and RM process. However, recent research suggests that little SDM is happening in clinical practice and service users are often unaware of their RA and RM plans. Therefore, the aim of the PhD is to design and evaluate an intervention that will increase SDM in RA and RM with people with severe mental illness.

Method: The present research will consist of a series of relatable studies: Study 1 is a systematic review of the literature to explore healthcare professionals’ experiences of SDM in RA and RM. Study 2 will use focus groups to identify possible barriers and solutions to implementing SDM in RA and RM, as perceived by both service users and healthcare professionals. Study 3 will synthesise the findings from study 1 and 2 in order to develop a training intervention that will be trialled with 20 healthcare professionals involved in RA and RM practices. Study 4 will evaluate the feasibility and acceptability of the intervention amongst the healthcare professionals who participated in the trial and 40 of their service users. Possible outcome measures will include: semi-structure interviews, Clinical Decision-making Involvement and Satisfaction (CDIS) measure and The Scale to Assess the Therapeutic Relationship (STAR).

Results: Currently, no data has been collected so the presentation will focus on background literature, rationale, aim, methods and potential challenges.

AQUINO Maria Raisa Jessica

Factors for successful collaboration between midwives and health visitors: Findings from a systematic review

Background: Interprofessional collaboration is promoted in health services with a view to improve health and social outcomes. In the UK and internationally, midwives and health visitors are encouraged to deliver maternal and child health services collaboratively. Broadly, this involves at least two groups working together with pregnant women and new mothers to provide safe and high-quality care. However, current evidence on factors influencing collaborative relationships between these professionals is scant.

Aims: To synthesise the literature concerning the methods employed by midwives and health visitors for achieving collaborative practice.

Method: Fourteen electronic databases were searched (inception-January 2015), for studies that explored collaboration between midwives and health visitors (and international equivalents, e.g., child and family health nurses in Australia), alongside searching reference lists and contacting key authors (n= 16). Inclusion criteria were: Studies exploring methods used for midwife-health visitor collaboration, published in English. Data were extracted, and assessed for study quality using relevant assessment tools. Data synthesis was conducted narratively.

Results: Searches yielded 5,484 papers, of which 18 (16 unique studies) were reviewed. Study quality varied widely. It was not possible to pool findings due to methodological heterogeneity. Means of
Collaboration reported include face-to-face contact, telephone contact and medical records. Relatedly, enablers and barriers were cited including liaison staff members and poor knowledge of each other’s role, respectively. Some factors presented as both enabler and barrier to collaboration, such as communication and information transfer.

Conclusions: This review synthesised the enablers and barriers to midwife-health visitor collaborative practices. The findings are limited by methodological heterogeneity and self-report measures, thus, no firm conclusions could be drawn. However, the identified enablers and barriers were consistently found across time and geographical locations, demonstrating the significance of addressing the issue of developing tools to support the implementation of interprofessional practice within this service context.

**ALJAFFARY Afnan**

Exploring Public attitudes towards the health system of Saudi Arabia: Preliminary results of focus groups discussion

**Aims:** This study provides an in-depth exploration of public attitudes towards and trust in the health system in the Eastern Province of Saudi Arabia.

**Methods:** A qualitative study in the Eastern Province of Saudi Arabia, including seven in-depth focus groups (a total of 31 participants).

**Data analysis:** Thematic framework approach (Ritchie & Lewis, 2013) was used to carry out the focus groups data analysis using Nvivo 10.0 software.

**Preliminary results:** Negative attitudes toward the health system were particularly pronounced among those who have had difficulty in obtaining care, especially people who live in rural areas.

Respondents seeking healthcare at public hospitals reported ‘accessibility barriers’ in the Saudi healthcare system but because they had no choice, they accepted these problems and tried to find excuses for them, as these problems could happen in any publically funded health system. The reputation of doctors and hospitals located in the capital city (Riyadh) was a key driver of respondents’ positive attitudes, high level of trust in the system, and their choice to obtain healthcare in Riyadh, under the assumption that a better reputation associate with higher quality care. However, the concentration of such care in Riyadh has negatively influenced the participants’ trust in the Saudi health system to achieve geographical equity in the region. Poorer people are less likely to be confident of the health system’s ability to cover their medical bills, especially medication expenses.

**Conclusion:** The participants in this study presented a positive attitude toward the Saudi health system and higher level of trust in the quality and efficiency of public hospitals. It is apparent within our data that public attitudes towards Saudi health system is not entirely influenced by their personal experience, but also by their reliance on others’ opinion, their residential area, and their socio-economic status.

**BARNARD Rachel**

Appraising quality for inclusion in a meta-ethnography: challenges faced and a novel tool

**Aims:** Meta-ethnography is the most commonly used approach for synthesizing qualitative research; it involves a process of translating concepts from one study into another in order to achieve a new level of conceptual understanding. There is much debate about what merits a paper for inclusion in this kind of synthesis, including researcher disagreement over markers of quality in qualitative work, and more specifically, how to determine whether the concepts in a paper are sufficiently rich to be translated. This study introduces a methodological advance for grading evidence for the purposes of meta-ethnography.

**Methods:** A systematic search strategy was used to retrieve papers on the basis of their potential to inform the research question ‘what influences communication between therapists and nurses in inpatient multidisciplinary teams’. Included papers were assessed for quality using the CASP (Critical Appraisal Skills Programme) tool for qualitative research, and then rated further using a novel tool developed by the researcher from the literature (eg. Toye et al., 2013). The tool is a matrix intended to support researchers when making inclusion decisions on the basis of conceptual clarity and trust in the interpretative process.

**Results:** The use of CASP helped focus reading of the papers, however it did not well support the kind of quality judgments required for meta-ethnography. Identifying concepts and judging their clarity was challenging, but facilitated by the tool. Papers were graded as low, medium, and high according to the weight of the evidence and potential to be translated into the synthesis.

**Conclusions:** The tool arising out of this research has increased the transparency of decision making for inclusion of papers in this study. There is strong research interest currently in improving reporting in meta-ethnography (France et al. 2015) and this paper is framed within, and extends, that discussion.

**BEKAERT Sarah**

Teenaged pregnancy: losing a pregnancy, an incentive toward rapid repeat pregnancy?

**Aims:** To explore the influencing factors on pregnancy decision making in relation to becoming a mother soon after an abortion whilst in the teenage years.

To consider these factors in relation to the legacy of the Teenaged Pregnancy Strategy (SEU 1999) and societal expectations for motherhood and childhood. To trouble these normalised expectations for motherhood and childhood in relation to a ‘lost’ pregnancy (Clarke 2002) and a situated context of poverty and violence.

**Methods:** 8 in depth interviews with young mothers, or mothers to be, who had previously had an abortion; using a narrative framework and the Listening Guide as both methodological approach and data analysis method (Gilligan et al 2003, Mauthner and Doucet 2008). This entailed readings for plot, voice of I, reader response, relationships, social structures and cultural contexts.

**Results:** Analysis suggests a decision to abort an early unexpected pregnancy due to expectations for academic achievement prior to childbearing; normalised technologies for the teenage years may affect how the young women narrate their stories and expectations for the future; that a ‘lost’ pregnancy (Clarke 2002), either through abortion or miscarriage might be an incentive to rapid repeat pregnancy despite a cooling of their intimate relationship with their partner (this will be the focus of this presentation); a context of poverty and violence can also push toward earlier pregnancy to ensure familial support networks are available to the mother; the young women employ creative strategies to maintain their baby’s father’s involvement in their new family.

**Conclusion:** This presentation will focus on how pregnancy loss, either through miscarriage or abortion may be an incentive for rapid repeat pregnancy. It will explore the psychological impact of both miscarriage, which was surprisingly prevalent, and abortion on the young women and their partner. It will consider how this appears to bring about differing reactions in the young women and men, and consider the consequences for their relationship.
BERNARDI Marialivia

Executive Functioning in Children with Developmental Coordination Disorder and Motor Difficulties: a 2-Year Longitudinal Study

Background: Executive functioning (EF) encompasses a cluster of higher order cognitive skills that regulate, monitor and control thought and action-1. Children with Developmental Coordination Disorder (DCD), a condition affecting 1.8-5% of the population2-4, have demonstrated poorer EF abilities in tasks requiring the processing of non-verbal information5-7. However, changes in EF with age can be identified during the school years8-9 and it is unclear how EF difficulties evolve in children with DCD.

Aims and Methodology: The research extended our understanding of EF in children with poor motor skills by assessing EF longitudinally. A group of 7-11 year-old children (N=51) were assessed on screening measures of reasoning, language and motor skills, and on a comprehensive EF assessment battery. Typically developing children with poor motor skills by assessing EF longitudinally. A group of 7-11 year-old children (N=51) were assessed on screening measures of reasoning, language and motor skills, and on a comprehensive EF assessment battery. Typically developing children who were screened for motor impairments but had no diagnosis of DCD. After 2-2.6 years, children completed the same EF assessment battery, which included verbal and non-verbal measures of all the following EFs: executive-loaded working memory, fluency, response inhibition, planning, and cognitive flexibility.

Results: Hierarchical multiple regressions revealed that time 1 children with DCD and MD had significantly lower scores than TD children on all non-verbal EF tasks, except switching for the MD group. There were no differences between groups on verbal EF measures, except fluency for the DCD group. Two years later, children with MD demonstrated significant gains in their planning and inhibition abilities, compensating for differences in comparison to the TD group, yet their difficulties in non-verbal fluency and non-verbal working memory persisted. Despite improvements that were detected in children with DCD, their EF profile did not change, as all non-verbal EFs and verbal fluency remained significantly poorer than TD children.

BISTARAKI Angie

Interagency collaboration among public health and safety providers in the 2012 London Olympic Games: perspectives on leadership.

Background: This study used the 2012 London Olympic Games as the empirical context to examine how interagency collaboration took place among the diverse public health and safety agencies involved in this mass gathering event. In order to develop our understanding of how collaboration among the key stakeholders in a mass event may be improved, this study aims at capturing the components that affected the ability of interagency collaboration to deliver its potential.

Methods: An exploratory case study design was used. Data were collected before, during and after the Games through semi-structured interviews, direct observations and documentary analysis. Template analysis was used to analyze the interviews’ transcripts, the fieldnotes from observations and the documents. The analysis generated a three-dimensional framework of interagency collaboration including leadership, communication and learning.

Results: Leadership shaped interagency collaboration through several characteristics including processes, skills, behaviours and relationships. Findings indicated that clear accountability among the organizations, codification of the key principles and standards and the physical presence of the leaders at the field were perceived as fundamental to the implementation of effective collaboration. Individual leadership played a stronger role in interagency collaboration than collective forms of leadership. Effective leaders were supportive, persistent, good listeners and easy to talk. Further, interpersonal trust between the leaders formed the basis for positive interagency collaboration.

Conclusion: Recognizing and understanding the above leadership characteristics is an important step towards the support of the collaborative endeavours in mass gathering events.

CAIN Helen M

Do Babies at High Risk of Communication Disorders Differ from Low-Risk Babies?

Introduction: Babies who have elder siblings with communication disorders are considered to be at high risk of speech, language and social communication difficulties, and as many as 20% of high-risk babies will go on to experience difficulties in some aspect of communication during childhood. As these difficulties can have far-reaching impacts on children’s academic and psychosocial outcomes, identifying early markers of later disorders is important, and hopefully will allow these children to receive earlier intervention in the future.

Method: 92 babies were recruited to the study and assessed between the ages of 8 and 22 months. These included 17 babies who have elder siblings with Autism Spectrum Disorder or other social communication difficulties, and 10 who have elder siblings with other difficulties with speech and language. Babies were assessed by observation and parental questionnaires, as well as a set of novel dynamic assessment measures. The sample is currently being followed up between the ages of two and three, in order to consider the social communication and language outcomes of participants.

Conclusion: The early trajectories of social communication disorders and speech and language disorders appear to diverge, which has important implications for how these disorders are understood and diagnosed in later childhood.

COELHO DE MELO Juliana Almeida

Nuclear Medicine Nurse in Brazil: an occupational health study

The nuclear medicine nurse is a specialty nursing related with care and support for users who undergo diagnostic procedures or therapy involving the use of unsealed sources of radioactive materials administered in vivo. In Brazil this specialty is regulated by the National Nursing through resolution Cofen nº 2011 of 1998. In nuclear medicine services, the patient becomes the ionising radiation emitter and will have direct contact with the nursing staff. This way, these services can be classified as complex environments depending on the workloads present in the work organisation. The data presented here refers to the pilot study of the thesis called “Organisation of Work and Occupational Diseases of Nursing Workers in Nuclear Medicine Services”.
This study is to identify workloads that nursing professionals are exposed to at work in nuclear medicine. The participants were eight nursing workers at two nuclear medicine centers located in Santa Catarina, Brazil. Data collection occurred by non-participant observation of 32 hours and application of questionnaires to employees.

For data analysis we used the qualitative content analysis that originated from two analytical categories, namely: perception of nursing professionals about the work in nuclear medicine and nursing workloads in nuclear medicine. The results show that nursing workers are exposed to the entire typical workloads of nursing, adding the physical burden arising from exposure to radiation. Biological, physical, mechanical, psychological and physiological loads are present, accentuating the effects on the worker’s body. Physical load is presented by the weakness in the knowledge of professionals added to the fear of the risks from ionising radiation. Investigate in training actions and recognise the workloads which are exposed are essential to minimize the strain on nursing staff in nuclear medicine.

Descriptors: workloads; nuclear medicine; occupational health; specialties nursing.

DELICATE Amy

A review and meta-synthesis of the impact of traumatic childbirth on couples’ relationships

Aims: There is a growing evidence that a psychologically traumatic childbirth can lead to post-traumatic stress disorder (PTSD) or symptoms in mothers and their partners. However, little is known about the impact of this on a couple’s relationship. Therefore, this study aimed to identify the impact of childbirth related PTSD on couples’ relationships.

Methods: A systematic review of the literature was conducted and records screened against the inclusion criteria of the review protocol. Remaining papers were assessed for quality and seven qualitative papers retained for meta-synthesis. Each paper was analysed to identify themes, which were then translated between papers and refined in order to create interpretive conclusions.

Results: All seven of the studies showed that childbirth related PTSD can have a negative effect on couples’ relationships, with case studies in two papers showing it leading to relationship breakdown. As well as relationship strain, additional themes of high emotions, lack of understanding and loss of intimacy were also identified. Conversely there was some evidence from two studies that experiencing childbirth related PTSD could strengthen relationships. A model of the impact of childbirth related PTSD on couples’ relationships is proposed which offers insight into the interaction between symptoms, themes and relationship outcome.

Conclusions: This meta-synthesis provides evidence couples’ relationships can be negatively impacted by childbirth related PTSD, and various symptoms of relationship strain are evident. Conversely there is some evidence to show that couples’ relationships are strengthened by going through this phenomenon. A proposed model of the impact of childbirth related PTSD on couples’ relationships is presented which offers a potential framework for future research.

DIKMEN YILDIZ, Pelin

The prevalence of posttraumatic stress disorder in pregnancy and after birth: A systematic review

Background: Previous reviews has provided preliminary insights into risk factors and possible prevalence of post-traumatic stress disorder (PTSD) postpartum with no attempt to examine prenatal PTSD. This study aimed to assess the prevalence of PTSD during pregnancy and after birth, and the course of PTSD over this time.

Methods: Psych INFO, PubMed, Scopus and Web of Science were searched using PTSD terms crossed with perinatal terms. Studies were included if they reported the prevalence of PTSD during pregnancy or after birth using a diagnostic measure. Studies of pregnancy loss or stillbirth were excluded.

Results: 56 studies (N=28,079) met inclusion criteria: 29 studies of PTSD in pregnancy and 30 studies of postpartum PTSD (where 3 studies provided prevalence of PTSD in pregnancy and postpartum). In normal samples the weighted mean prevalence of PTSD during pregnancy was 4.18%. The majority of postpartum studies (28/30) measured PTSD in relation to traumatic birth with a weighted mean prevalence of 3.2%, which increased to 4.7% six months postpartum. Women in high risk groups were at more risk of PTSD with a mean prevalence of 18.43% in pregnancy and 20.2% after birth. Using clinical interviews was associated with higher prevalence rates in pregnancy and lower prevalence rates postpartum.

Limitations: Use of stringent diagnostic criteria, wide variability in prevalence rates of PTSD, and inadequacy of studies on prenatal PTSD measured in three trimesters are limitations of this study.

Conclusions: PTSD is prevalent in women during pregnancy and after birth and may increase postpartum if not identified and treated. Assessment and treatment in maternity services is recommended.

FAULKNER Alison

The role and value of experiential knowledge in mental health research

Aims: This thesis is being undertaken by prior publication, exploring the role and value of experiential knowledge in mental health across ten publications that span 15 years of the researcher’s development. The author takes an explicit position as both mental health service user/survivor and researcher in relation to the research included in the thesis. The publications constitute different manifestations of survivor research, user-led and user-controlled research and user involvement in research across diverse topics in mental health: peer support, ways of managing mental distress, community services for people diagnosed with personality disorder, acute inpatient care and risk.

Methods: The publications are examined through a narrative that explores the meaning of experiential knowledge and its role in survivor research and survivor activism; the role of identity and power for survivor researchers; the role of personal narratives in survivor research. Standpoint theory and emancipatory research paradigms are explored for what they can contribute to understanding the research included in this thesis.

The thesis follows a structure that first examines these underlying concepts and then explores the publications with a critical appraisal of the methodologies used and emerging theoretical underpinnings.
Results/conclusions: The presentation will address the final chapter which will explore the concepts in relation to the research, with particular emphasis on research impact and new knowledge. All mental health research is undertaken within a particular political context and is influenced by the dominant paradigms - of positivism and biomedical understandings of mental ill health. A number of questions arise from this: to what extent can survivor research (undertaken in opposition to these paradigms) influence or inform mental health practice and to what extent can it contribute new knowledge to the mental health field?

LOWE Hilary

Vocabulary intervention in adolescents with language difficulties

Background: Five to six percent of children have language difficulties in the absence of physical, neurological, or sensory impairment, and these difficulties can persist throughout the school years (Law et al., 2000). Many of these children have limited vocabulary (McGregor et al., 2013), which places them at risk for academic failure (Snowling, Muter, & Carroll 2007; Croll, 1995). There is evidence for the effectiveness of phonological (sound) and semantic (meaning) vocabulary intervention in individual therapy (Wilson et al., 2015), in a whole-class primary school setting (St John & Vance, 2014), and in a small-group mainstream secondary school setting (Joffe 2011). However, there is limited research into vocabulary intervention for students with language difficulties in a whole-class mainstream secondary school setting (St John & Vance, 2014), and there is limited research into vocabulary intervention for students with language difficulties aged 11 – 13 years who were recruited from two schools. They were taught science curriculum words by teachers in class, under two conditions: 1) 10 words taught using routine teaching practice; and 2) 10 words taught using phonological-semantic activities. The phonological-semantic activities involved exploring what a word sounds like and what it means e.g. “evaporation begins with e, has 5 syllables, and means when a liquid turns into gas”. Progress in word knowledge was measured for both of these sets of words, together with a set of 10 words receiving no input.

Results: Positive feedback regarding the phonological-semantic activities was received from teachers. Preliminary results will be presented.

Future directions: The study is currently ongoing, and recruitment will continue until a sample size of 120 is reached. It is hoped that the research will highlight effective strategies that can be used by teachers in mainstream secondary schools to enhance vocabulary learning for all students.

MCDONALD Leanne

Self-monitoring visual symptoms in glaucoma: a feasibility study of a web-based diary tool

Aims/Purpose: Patients spend only a few hours a year in the eye clinic having their glaucoma monitored, but they spend 5000+ waking hours each year engaged in everything else. We propose patients could be encouraged to self-monitor changes in their visual symptoms with the aim of making them more engaged in their ‘glaucoma journey’ and providing valuable between-visit information; we test the hypothesis that this is feasible using a web-based diary tool.

Methods: Twenty-six children with language difficulties aged 11 – 13 years were recruited from two schools. They were taught science curriculum words by teachers in class, under two conditions: 1) 10 words taught using routine teaching practice; and 2) 10 words taught using phonological-semantic activities. The phonological-semantic activities involved exploring what a word sounds like and what it means e.g. “evaporation begins with e, has 5 syllables, and means when a liquid turns into gas”. Progress in word knowledge was measured for both of these sets of words, together with a set of 10 words receiving no input.

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RESULTS

Vocabulary intervention in adolescents with language difficulties

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Aims: This study aims to investigate the effectiveness of phonological-semantic activities to enhance vocabulary learning in mainstream secondary school classes.

Methods: Ten glaucoma patients (median age: 70 [interquartile range (IQR): 66-76] years) with a range of visual field loss (best eye Humphrey mean deviation (MD): -9 [-13, -4] dB) took part in a prospective mixed-methods study lasting 8 weeks. Participants completed an eye examination and validated questionnaires assessing visual function, personality and coping traits. Participants were asked to complete symptom monitoring questions every 3 days and were invited to complete a diary about their vision during daily life. Responses to the latter were qualitatively analysed using a thematic approach. Response to an end of study questionnaire about usefulness and acceptability of the web-based diary tool was used as a main outcome measure.

Results: Eight of the 10 patients rated the monitoring scheme to be ‘valuable’ or ‘very valuable’ with the majority expressing a preference of using a web-based tool. Completion rate to items was excellent (96%) and median (IQR) number of diary words recorded per patient was 1858 (703, 4094). Average scores from the items did change temporally in some patients during the 8 week period. Most themes emerging from the qualitative synthesis were related to behavioural aspects that might be overlooked in typical patient-clinician consultations.

Conclusions: Volunteer patients, with a range of disease severity and personality types, adhered remarkably well to using a web-based diary tool to monitor their glaucoma symptoms. A web-based diary intervention for the self-monitoring of glaucoma may therefore be feasible.

Future directions: The study is currently ongoing, and recruitment will continue until a sample size of 120 is reached. It is hoped that the research will highlight effective strategies that can be used by teachers in mainstream secondary schools to enhance vocabulary learning for all students.

Low how many patients were involved in the study?

The study involved ten glaucoma patients (median age: 70 years) with a range of visual field loss (best eye Humphrey mean deviation (MD): -9 dB). The patients completed an eye examination and validated questionnaires assessing visual function, personality and coping traits. Participants were asked to complete symptom monitoring questions every 3 days and were invited to complete a diary about their vision during daily life. Responses to the latter were qualitatively analysed using a thematic approach. Response to an end of study questionnaire about usefulness and acceptability of the web-based diary tool was used as a main outcome measure.

Results: Eight of the 10 patients rated the monitoring scheme to be ‘valuable’ or ‘very valuable’ with the majority expressing a preference of using a web-based tool. Completion rate to items was excellent (96%) and median (IQR) number of diary words recorded per patient was 1858 (703, 4094). Average scores from the items did change temporally in some patients during the 8 week period. Most themes emerging from the qualitative synthesis were related to behavioural aspects that might be overlooked in typical patient-clinician consultations.

Conclusions: Volunteer patients, with a range of disease severity and personality types, adhered remarkably well to using a web-based diary tool to monitor their glaucoma symptoms. A web-based diary intervention for the self-monitoring of glaucoma may therefore be feasible.

Future directions: The study is currently ongoing, and recruitment will continue until a sample size of 120 is reached. It is hoped that the research will highlight effective strategies that can be used by teachers in mainstream secondary schools to enhance vocabulary learning for all students.

Oral presentations

MOSS Becky

Using assistive technologies to compensate for writing and reading deficits for people after stroke

Background and aims: Aphasia is a language impairment affecting approximately one third of people who have a stroke. It can impact speaking, comprehension, writing and reading. A small number of single-case studies have trained people with aphasia (PWA) to use voice recognition software (VRS) and observed a positive impact on their writing performance. In this study, ten PWA who found writing particularly difficult - some also had reading difficulties - were taught to use two mainstream assistive technology (AT) software packages, Dragon NaturallySpeaking™ and ClaroRead™. The research questions were:

1. Does AT training compensate for writing reading impairments?
2. Does AT training impact social participation and/or quality of life?
3. What are the barriers to using AT software for PWA?
4. What strategies help overcome these barriers?

This presentation will focus on questions 1, 3 and 4.

Methods: Participants received 10 one-hour, individual training sessions. The study used mixed methods and adopted a compensatory approach, bypassing impairments and harnessing preserved strengths. Primary outcome measures of functional writing and reading were administered (repeated baseline, immediately after training, at three month follow up), in two formats: 1. Pen and paper, 2. Keyboard, used conventionally pre-training and with AT software enabled post-training. In-depth, semi-structured qualitative interviews were also conducted at these time points, and participant observation took place throughout training.
Results: Group performance on writing and reading assessments was significantly improved when using AT post-training; no such improvement was seen when the same tasks were undertaken with pen and paper. Results were maintained at follow up, indicating that the group were able to continue with independent software use.

Conclusion: This study demonstrated that assistive technology provided access to functional writing and reading for a majority of participants and a wide range of genres were explored. Further analysis of qualitative data is planned, in order to explore factors influencing successful use.

ROPER Abi

Learning communicative gestures – the effects of a computer supported therapy for severe aphasia

Aims: This study aimed to establish the effects of a novel, responsive, computer gesture therapy tool (GeST) for 20 adults with severe aphasia – a language impairment caused by stroke.

Methods: 20 participants with severe chronic aphasia (mean age 67, mean time post-stroke 59 months, mean performance on spoken picture naming subtest 1/24) received 5 weeks of GeST therapy, supported by weekly therapist input. During therapy, GeST provided model examples of gesture and monitored users’ repetitions for accuracy using a vision-based gesture recognition system. Repeated practice with GeST was promoted by the use of a game-like virtual environment and a variety of individual and ‘real-world’ video stimuli. Examples of gestures trained include child, walking stick and food. Outcome measures were administered at four time points, separated by five-week intervals (including pre and post-therapy assessments). Computer log data captured therapy practice time and system usage information. The primary outcome measure assessed gesture production from a picture. Videos of participants’ gestures were shown to scorers blinded to the target item and time of assessment and scorers were asked to identify the item being gestured. Participants were awarded points for each item correctly identified.

Results: Participants practised for an average of 14 hours 22 minutes and completed an average of 50 practice sessions - suggesting a relatively intense practice schedule. Results from the primary gesture assessment suggest a significant increase in the number of identifiable gestures produced after therapy (F=10.88 (1,18), p<0.005).

Conclusion: Outcomes indicate that participants with severe aphasia can achieve an intensive amount of autonomous gesture practice using a computer-supported gesture therapy. Moreover, this practice promotes a significant improvement in the number of recognisable gestures they are able to produce.

SEKHON Mandeeep

Application of a theoretical framework to assess intervention acceptability: A semi-structured interview study

Background: The importance of considering acceptability of healthcare interventions has been recognised. However there is little guidance on how to assess acceptability. Previous research has treated acceptability as a simple construct, assessed unidimensionally. Such an approach restricts the potential to identify variation, and to discriminate between interventions with high versus low levels of acceptability. The purpose of this study was to compare the use of a multi-construct framework with a more general approach, to investigate acceptability.

Methods: Eleven healthcare professionals (HCPs) completed semi-structured interviews about the acceptability of two interventions. The first was an audit-and-feedback intervention (i.e. summary of clinical performance provided to HCPs) relating to blood transfusion practice. The second was an online toolkit to support hospital staff to respond to the feedback (e.g. by prompting action planning). Questions within the topic guide framed acceptability as (1) a global construct (i.e. one question about acceptability in general); (2) a multi-component construct (7 questions about acceptability), based on a recently-developed theoretical framework of acceptability (TFA). Transcripts were analysed using framework analysis.

Findings: When answering the global question, participants (a) spontaneously referred to several constructs in the TFA, and (b) reported that both interventions were acceptable. Based on responses to the set of questions based on the TFA, participants reported more varied assessments of acceptability.

Discussion: Investigating acceptability as a multi-component construct resulted in greater level of discrimination between levels of acceptability. The TFA could be applied to explore acceptability of healthcare interventions more widely.

TAYLOR Deanna

Searching for objects in everyday scenes and recognising faces: measuring performance in people with dry age-related macular degeneration (AMD)

Aims: Age-related macular degeneration (AMD) is a highly prevalent condition which causes progressive loss of central vision. Treatment success in clinical trials would ideally be aligned to measureable performance in visual tasks rather than imperceivable changes on a clinical chart. We sought to test the hypothesis that patients with dry AMD (~90% of diagnosed AMD cases) perform worse than visually healthy peers on computer-based surrogates of ‘real-world’ tasks in a prospective case-control study.

Methods: People with varying severity of dry AMD performed two previously validated computer-based ‘real-world’ visual tasks. In a search task, participants searched for items within photographs of everyday indoor and outdoor scenes. Average search times across the images were recorded. In a face recognition (FR) task participants completed a modified version of the Cambridge Face Memory Test. Percentage of correctly identified faces was used as an outcome measure for performance. Comparisons for both tasks were made against a 90% normative limit for the outcome measures established in 33 age-related people with healthy vision who performed the same tests.

Results: Thirty one patients were examined. Four, eighteen and nine patients were categorised as having early, intermediate and late AMD respectively. Nineteen (61%) patients exceeded the 90% normative limits for delayed average search time and this was statistically significant (Fisher’s Exact Test, p<0.0001). Five patients (17%) recorded FR performance worse than the 90% limit (p<0.04), four of these had late AMD.

Conclusions: People with dry AMD, certainly those with advanced disease, are likely to have measurable difficulties beyond those observed in visually healthy peers on search and face recognition tasks as presented on a computer set-up. Further work might establish results from these types of tasks to be useful in patient management and as end-points for clinical trials for treatments for dry AMD.
BOYES Morag

An investigation into the language skills underlying reading in secondary school students

Background: Reading is a learnt skill taught by varied instruction methods and reading schemes. A commonly used and popular framework of reading, The Simple View of Reading2 isolates the process of reading into two dimensions: decoding and listening comprehension. This simple view of reading has clear implications for teaching reading in the classroom: the need to teach decoding skills and oral language skills. A lot of existing research into the role of oral language skills has been aimed at primary aged pupils3. As children move into secondary education, there is an expectation that they can read and secondary teachers use written language as a medium for learning. Studies with secondary aged pupils have linked low literacy skills to low academic outcomes4 and some studies have shown that adolescents with reading comprehension problems also have language difficulties5.

Aim: The aim of the study is to explore the oral language and reading skills (decoding and comprehension) of a group of secondary school students across years 7, 8 and 9 from a mainstream secondary school in an area of low social deprivation.

Method: This is a retrospective longitudinal study tracking the stability of reading profiles of year 7, 8 and 9 students within a mainstream secondary school serving a low socio-economic area. It will use a mixed methods approach examining both quantitative and qualitative data.

Conclusions: The longitudinal profiles of language and literacy will provide key information on the development of language and literacy across the secondary school years, the stability of the profiles and the inter relationships between language, literacy and other factors that have been shown to impact on educational performance including cognitive ability and socio-economic status. This information will be used to support the teaching of literacy, in primary and secondary school, at a policy and practice level.

CHRISTOPHER Emma

Improving Working Memory in Children with Language Difficulties

Background: Training has recently produced reliable gains in working memory skills for typically developing children. Those in a trained group showed significantly larger gains than controls in two trained executive loaded working memory tasks (Listening Recall and Odd One Out Span) and two untrained working memory tasks (Word Recall and Counting Recall) with effects still evident at 6 month follow up (Henry, Messer & Nash, 2014). Significant gains were also present within the trained group for reading comprehension, still evident at 12 month follow up. This suggests that an intervention that strengthens ability to divide attention between processing and storage may have a specific benefit for reading comprehension (Henry et al., 2014).

Aim: Children with language impairments commonly demonstrate a deficit in working memory ability (Montgomery, Magimairaj & Finney, 2010). The current research will assess whether improvements in working memory ability found via interventions with typically developing children can be replicated for those with language difficulties.

Methodology: Up to 100 children, aged 6-11 years, with language difficulty as a primary need, will be randomly allocated to a working memory intervention or an active control group. Working memory training will involve 18, 10-minute training sessions, over a 6-week period focusing on the Listening Span Task and Odd One Out Span Task. Children will be assessed at pre-intervention, post-intervention, 4-month and 12-month follow up via outcome measures of working memory ability,
sentence comprehension, reading comprehension, reading accuracy and receptive grammar. Two factor mixed ANOVAs will examine the effects of the intervention on each participant group (active control versus intervention) at each assessment time point (pre, post, 4-month and 12-month follow up) for each outcome variable. Main effects and interactions will indicate the presence or absence, scope, and maintenance of training gains.

HOBBY Angharad

**Effect of varying skin surface electrode position on electroretinogram responses recorded using a handheld stimulating and recording system**

**Aims:** The RETeval system (LKC Technologies, Inc., Gaithersburg, MD, USA) is a hand-held device for recording electroretinogram (ERG) responses with skin electrodes, placed immediately below lower lid margin, which some participants find uncomfortable. We explored the effect of changing electrode position in healthy volunteers.

**Methods:** Photopic flicker ERGs were recorded in 120 healthy twins as part of a wider study. For 48 subjects (Group 1), recording electrodes were placed up to 1 cm below the lid margin. For 72 subjects (Group 2), the recommended lid margin position was used. Photopic flicker and flash ERGs were recorded for 5 healthy subjects in two consecutive recording sessions: in the test eye, the electrode was placed just below the lid margin in the first session, 1.5 cm below in the second; in the fellow eye (control), the electrode was placed 1.5 cm below in the second; placed just below the lid margin in the sessions: in the test eye, the electrode was positioned lower than recommended (p<0.05), but implicit times were similar (p>0.6).

**Conclusions:** Moving RETeval electrodes further from the lid margin significantly reduces response amplitudes, but does not significantly affect implicit times. Unless analysis is restricted to implicit time parameters, it is not recommended to alter the position of the electrode as suggested by the manufacturer.

MCINTYRE Stephen

**Use of theory in process evaluations of interventions to change healthcare professional behaviour: a systematic review**

**Background:** Understanding how, why, and under what conditions interventions are effective remain critical issues for advancing health psychology and improving health care delivery. Process evaluations (PEs) explore such issues. The Medical Research Council guidance for designing and conducting PEs of complex interventions recommends explicitly using theory. However, whether and how theory has been applied in PEs of healthcare professional (HCP) behaviour change interventions is unclear. This review aims to investigate (a) to what extent, and (b) how theory has been used in PEs of HCP behaviour change interventions.

**Methods:** Electronic databases will be searched using terms related to four concepts: process evaluation, healthcare professionals, behaviour/practice change, and intervention. Eligible studies will report a PE of a HCP behaviour change intervention. Data extraction will include study characteristics and the extent to which theory is used. Extracted data from PEs employing theory will include: types of theories used, theoretical constructs measured, and description of cause-and-effect associations between theoretical constructs.

**Expected results:** This review will provide an overview of current theory use in PEs, and describe the state-of-the-science in PE literature.

**Current stage of work:** Search strategy, eligibility criteria, and data extraction sheets have been drafted. Based on scoping searches, precision of the search strategy is acceptable.

**Discussion:** Establishing current theory use in PEs is essential for optimizing the application of theory in PEs. Review findings will inform a theory-based PE of an audit-and-feedback intervention aiming to improve blood transfusion practice and may similarly inform the design of other theory-based PEs.

MOTTA Giordana

**Development of a strategy to deliver postnatal care in a group-based model for implementation in socially disadvantaged communities**

**Background:** The postnatal period is a relatively neglected area of practice in both high- and low-income countries. Furthermore, the most appropriate model to provide postnatal care (PNC) is still a subject discussed worldwide. Conducting group-based care with the participation of mothers and their babies during postnatal period, following the group antenatal care, could help improving satisfaction and maternal-child health outcomes.

**Aim:** To develop a group-based model of PNC in socially disadvantaged communities.

**Methods:** The study will add a postnatal component to the research project on group-based antenatal care entitled REACH Pregnancy Programme, which is underway in East London. The research will consist of three phases:

1. **Focus groups:** To identify women’s and midwives’ views and needs regarding PNC and its delivery in a group;
2. **Feasibility study:** To implement, in test groups, the protocol for group-based PNC developed based on data emerging from the focus groups, and on a literature review with systematic approach. This phase will assess women’s acceptability of this model and further develop the intervention protocol;
3. **Pilot trial:** To assess the feasibility of a full trial to implement the group-based PNC for the proposed setting, assessing the outcomes similarly to a main trial.

**Results:** The results of this study will help to develop a new model of care for the postnatal period to be implemented in disadvantaged communities in London. Also, as part of the grant offered by the Brazilian Government for the completion of this PhD, new research will be held to implement this model in the Brazilian context.

**Strengths and limitations:** Developing a new strategy of delivering PNC could improve women’s adherence to health care and inform policy and practice changing.

As a limitation, a full randomized controlled trial will not be possible to be completed during the time of this PhD.

WHITELOW Pauline

Are parent focused web-based interventions effective in helping parents of children with a chronic illness manage their child’s condition? Evaluating a specifically designed web-based intervention for parents.

**Background:** Parents of children with Juvenile Idiopathic Arthritis (JIA) report distress relating to their child’s illness. Parental distress and functioning have been found to be related to child outcomes in several studies of children with a chronic illness. Interventions that help
parents to manage their child’s illness can result in benefits for both the parent and child. However, attending a face-to-face intervention may be difficult for many parents to fit into their lives. An alternative approach is to provide online interventions which offer round-the-clock access to information.

Study Aims: To determine if web-based interventions for parents of children with chronic conditions are effective in helping them to manage their child’s condition.

Methods: The research will consist of:
1. A Systematic review of web-based interventions for parents of children with chronic conditions
2. Evaluation of a website for parents of children with JIA in a Randomised Controlled Trial.
3. A Process Evaluation (mixed methods) of the website for parents of children with JIA

Summary: This PhD will evaluate the website for parents of children with JIA, undertaking a process evaluation to assess the components which contribute to the effectiveness of the website.

Wong Samford

Is undernutrition risk associated with an adverse clinical outcome in spinal cord injured patients with severe pressure ulcer?

Pressure ulcers (PU) are serious, costly and potentially life-long complications of spinal cord injury (SCI). Co-morbid conditions such as reduced mobility, sensory impairment and old age have been identified as risk factors for PU but others such as nutrition-risk is debated. The objective of this study is to (1) establish the incidence and location of grade 3 or above PU; (2) describe the prevalence of undernutrition risk using a validated disease-specific nutrition screening tool – Spinal Nutrition Screening Tool (SNST); (3) evaluate whether under-nutrition risk is associated with a worse clinical outcome in respect of length of in-patient hospital stay (LOS); bed-rest days and mortality within 12 months of admission to SCI centre. A retrospective review of patients admitted for PU management from January 2012 to December 2013 at the National Spinal Injuries Centre, Stoke Mandeville, UK was completed. Data collected included PU, medical and nutrition history as well as LOS, duration of bed-rest and mortality within 12 months of admission. A total of 779 patients were admitted during January 2012 to December 2013, of which 66 (8.5%) patients (mean age: 61 years; 24.3% female) with SCI (24.2% tetraplegia; 83.3% complete SCI) were admitted for PU management with a grade 3 or above PU. The top 3 sites for PU were Ischium (58.6%); Sacral (21.5%) and Trochanter (12.3%). None of these patients had trace-elements checked. Only 23 (34.8%) of patients were referred for nutrition assessment / intervention. These patients tend to have multiple PU (52.1% v 20.9%, p<0.001) and lower serum-albumin (g/L: 25 v 30, p=0.009). The patients initially undernourished or at-risk of undernutrition (56.1%) had a significantly higher 12-month mortality (% deceased: 27.8% v 6.7%, p=0.026). Non-significant differences were observed for LOS (undernutrition risk: 116 v 78.5d, p=0.458) and bed rest days (undernutrition risk: 74.5d v 58.5d, p=0.456). Many factors contribute in the development, course and treatment of PU. The present study suggests that under-nutrition risk, as identified by the SNST, is associated with adverse clinical outcome. Routine nutrition screening should be helpful in improving clinical outcomes if it promotes more appropriate and effective nutrition intervention. Further study should address whether nutrition intervention is cost- and clinical- effective.