Sustaining Cognitive Performance: Age and Sleep Deprivation

Repeated nights of being restricted to less than 5 hours of sleep have a large, cumulative negative impact on cognitive performance. Recent advances in statistics, however, also show that there is considerable individual variability in how performance declines under conditions of sleep restriction.

In an article published this quarter, we used a discontinuous growth model to show that older individuals maintain cognitive performance better than do younger individuals across both sleep and non-sleep restricted conditions demonstrating the importance of considering individual difference variables in adjusting to transitions.

Battlemind Update: Developments in Post-Combat Transition Training

WRAIR’s Battlemind – the inner strength to face fear and adversity in combat with courage -- has developed from a two-part post-deployment training module into a systematic program for supporting Soldiers and their families across the deployment cycle.

The series of products for pre-deployment and post-deployment for Soldiers and their families now includes:

- PowerPoint briefs with trainer notes
- a DVD for 3-6 months post-deployment training
- brochures for leaders, soldiers, health care providers and families.

Each product has been subjected to pilot testing and program evaluation and the post-deployment products have been the subject of randomized controlled trials. COL Hoge, Director, Division of Psychiatry and Neuroscience, and LTC (P) Castro, Chief, Department of Military Psychiatry, at the WRAIR, are in the lead.

Advanced Battlemind Training is the latest development in this emerging research-based resiliency program. Plans are underway to test enhanced post-deployment Battlemind Training to maximize the effectiveness of Battlemind and target specific issues that Soldiers face when transitioning from combat to home.

COL Hoge, LTC (P) Castro, and MAJ McGurk met with USAMRU-E science staff in Heidelberg from 4 – 7 DEC 06 to discuss the new Advanced Battlemind protocol.

Research Management: A Priority

In keeping with trends in the US and elsewhere, the Office of Research Management (ORM) at the WRAIR continued its emphasis on regulatory compliance and research protocol management with a second site visit this year (10-13 OCT 06). Three ORM contractors, Ms. Sun, Ms. Holthaus, and Ms. Ramsey, visited the unit, reviewed protocol records and data files, and provided guidance on developing unit Standard Operating Procedures (SOPs).

At the end of the visit, COL Kester, Deputy Director, WRAIR, met with science staff members and the ORM team to discuss the way ahead in terms of research management (13 OCT 06).

Consulting on Science

- LTC Bliese provided consultation and research expertise on a potential HMEDDAC project to assess the utility of influenza vaccines in high-risk populations (29 NOV 06).
- Dr. Adler provided consultation to LTC Johnson, a nurse at the Hanau Health Clinic, on writing a manuscript intended for a nursing journal (27 NOV 06 & 12 DEC 06).

Army Science Conference

Recent research efforts were featured in Army Science Conference presentations at the annual meeting held in Orlando, FL (27-30 NOV 06):


MSC Symposium

LTC Bliese and CPT Cabrera attended the annual Medical Service Corps Symposium in Grassau, Germany (14-17 NOV 06). LTC Bliese presented:


USAMRU-E Invited Talks

LTC Bliese (19 DEC 06) was invited by the Institute of Psychology at Rheinisch-Westfälisch-Technische Hochschule (RWTH) Aachen University. He presented a talk entitled “Applying Mixed-Effects Models in US Army Medical Research.”

Dr. Adler (20 DEC 06) presented an invited talk on Debriefing and Battlemind to the Combat and Operational Stress Control Team in Giessen, the only such garrison-based team in Europe.

LTC Bliese (15 DEC 06) was invited by the Department of Psychology at the Free University in Brussels to talk about Mixed-Effects Models and applications to sleep research.

LTC Bliese (12 DEC 06) presented a talk to staff at the Kleber Health Clinic in Kaiserslautern on post-deployment psychological health assessment research.

New Appointment

LTC Bliese was named to the Editorial Advisory Board of the scientific journal Human Performance.

Personnel Updates

- Dr. Adler, along with several Division of Psychiatry and Neuroscience staff members, received a citation for the Battlemind development team’s participation in the US Army Greatest Invention Program – US Army Telemedicine and Advanced Technology Research Center (OCT 06).
- Dr. (Ippolito) Lang completed her doctorate in psychology at the University of Mannheim, graduating summa cum laude (18 DEC 06). She defended her dissertation on developing a psychological stress model for activated National Guard personnel (protocol #931).