

J. Behan, D. Prendergast, B. Quigley, L. Walsh. *Determining the relationship between sleep and social activity in community-dwelling older people. Gerontechnology 2008; 7(2):70.* Is sleep the new vital sign? Much like nutrition and exercise the issue of sleeplessness is emerging as an important aspect of health promotion and disease prevention. Research has shown that more than half of all adults aged over 65 have suffered from at least one sleep complaint and approximately one third report sleep maintenance insomnia or early morning awakening¹. However, whilst some have pointed out the links between sleep disturbance in older people and the deterioration of the circadian timing system², there is a growing body of research that suggests that this is not an inevitable consequence of ageing but should be considered in relation to a range of factors including life events, chronic disease, physical disability, depression, widowhood, medication, and social activity. Ohayon et al.³, for instance, suggests that amongst retirees continuing engagement in social life coupled with curtailing time in bed is associated with preservation of better sleep quality. We describe a preliminary study carried out by the Digital Health Group in Intel with the aim to examine daily social rhythms in community dwelling seniors and their relation to objectively and subjectively recorded sleep and to determine the inter-relationship between daytime and nocturnal routines. **Methods** Ten independently living older adults were recruited from a focus group in a rural village in County Meath in Ireland. A pre-trial ethnographic interview was held in the home of each participant to broadly identify perceived lifestyle patterns, social, physical, mental and leisure activities, networks, nocturnal habits, etc. A network of sensors was placed in each household for a period of two weeks. Sociality behaviours were explored through social contact both through phone conversation and human interaction, through mobility, inside and outside the home, and through a person's self reported internal state. The sensing elements included a Tactex™ under mattress bed pressure sensor, an actigraph watch, caller-id logging on landline telephones, pedometer, personal and automobile GPS tracker devices and morning and evening daily audio diaries. A mid trial visit was paid at the end of week one, and further ethnographic interviews were conducted at the end of the trial. **Results and discussion** A quality of sleep measure was extracted for each participant using a measurement of time in bed, time spent asleep, sleep efficiency, number of bed exits and an index of restlessness and this was compared to a social rhythm, mobility and activity (SRMA) index (Figure 1). Initial results have shown that sleeping patterns in the participants were quite regular but disturbances are clearly identifiable and may be linked to specific instances such as pain, anxiety and fear. The appearances of short disturbances within a regular sleeping pattern do not seem to disrupt the daily social rhythm.

References

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Address: Intel Ireland, Ireland; E: julie.behan@intel.com

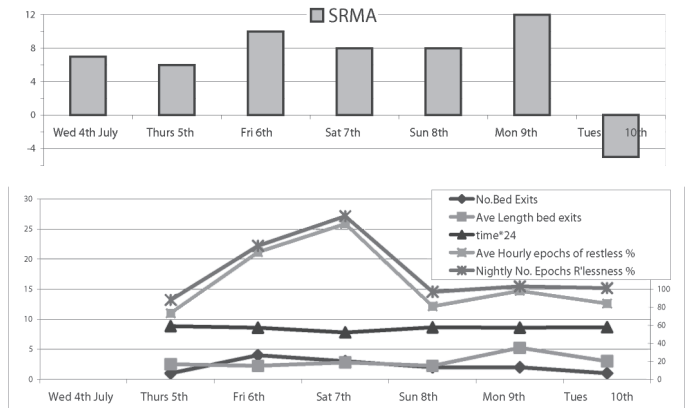


Figure 1 SRMA and Sleep. A sleep disturbance is seen on Saturday night but does not seem to impact the SRMA index