

Experience sampling and physical activity measurements to improve workday satisfaction

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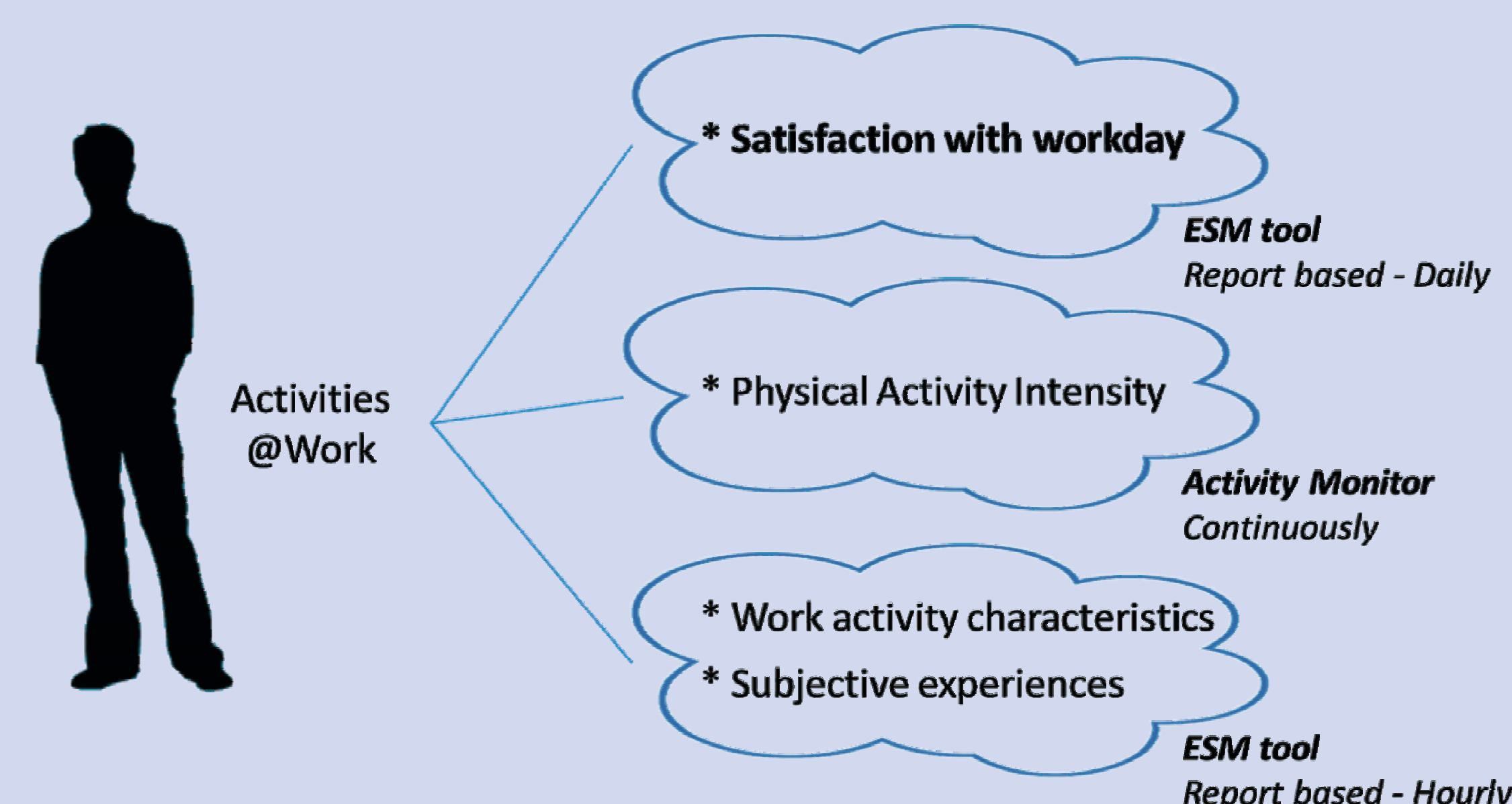
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Introduction

In our western aging society, retirement ages are rising, resulting in a substantial and growing number of older (desk) workers with specific needs. Workplaces should be adapted but to be able to create such solutions we need a good understanding of factors determining motivation and work satisfaction.

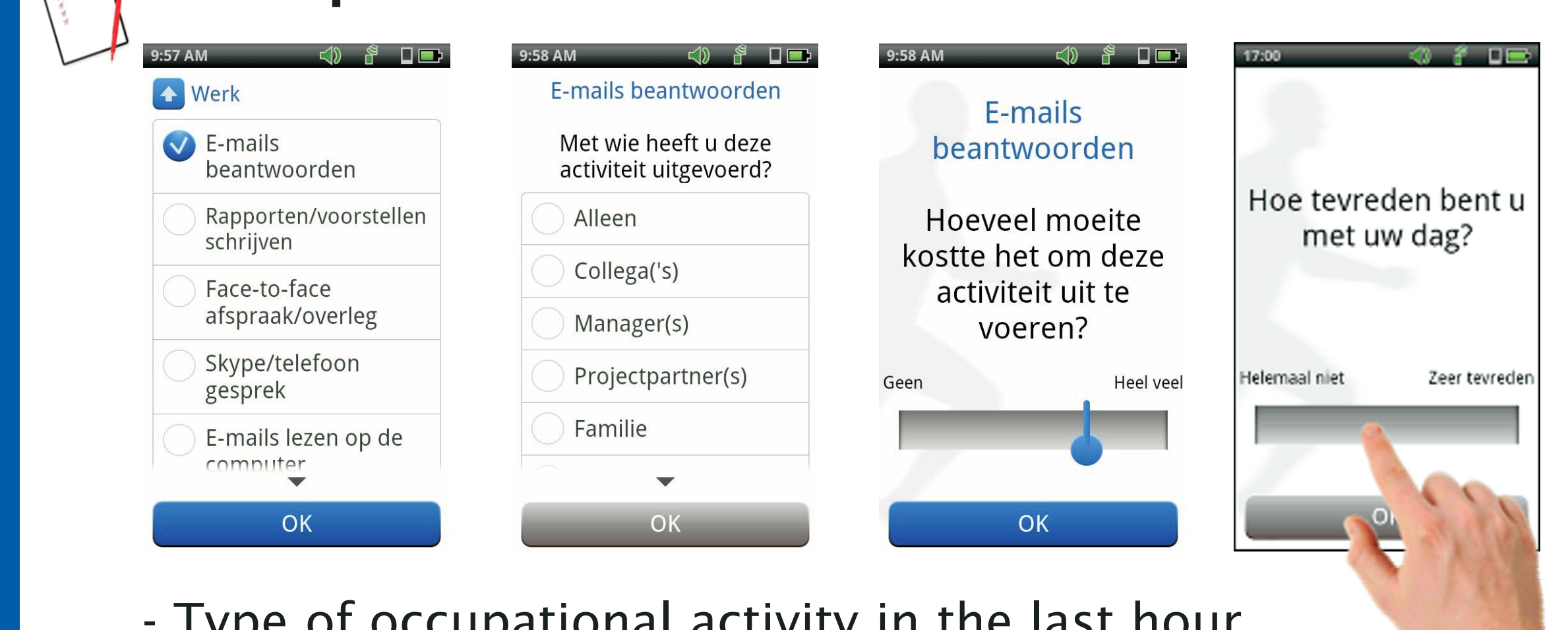
Research Question

Which variables of physical activity, feeling, fun, effort and energy predict satisfaction with the workday?



Method

Self report - ESM tool



- Type of occupational activity in the last hour.
- Feeling, fun, effort and energy regarding that activity.
- Satisfaction at the end of the workday.

Objective - Physical Activity Monitoring

Hip-worn 3D accelerometer (Promove3D, Inertia Technology, The Netherlands) to measure activity patterns at work. During 1 workweek.



Independent variables	R ² with Satisfaction
Subject	0,03
Day	0,08
IMA_MIN	0,01
IMA_MAX	0,14
IMA_range	0,14
IMA_median	0,14
IMA_nanmean	0,03
IMA_nanstd	0,24
Number_Act	0,00
feeling_mean	0,09
feeling_std	0,20
feeling_min	0,15
feeling_max	0,01
feeling_range	0,17
fun_mean	0,53
fun_std	0,31
fun_min	0,51
fun_max	0,08
fun_range	0,44
effort_mean	0,41
effort_std	0,20
effort_min	0,01
effort_max	0,15
effort_range	0,13
energy_mean	0,34
energy_std	0,13
energy_min	0,29
energy_max	0,03
energy_range	0,14

Independent variables and their correlation with Satisfaction

Results

Multivariate linear regression model

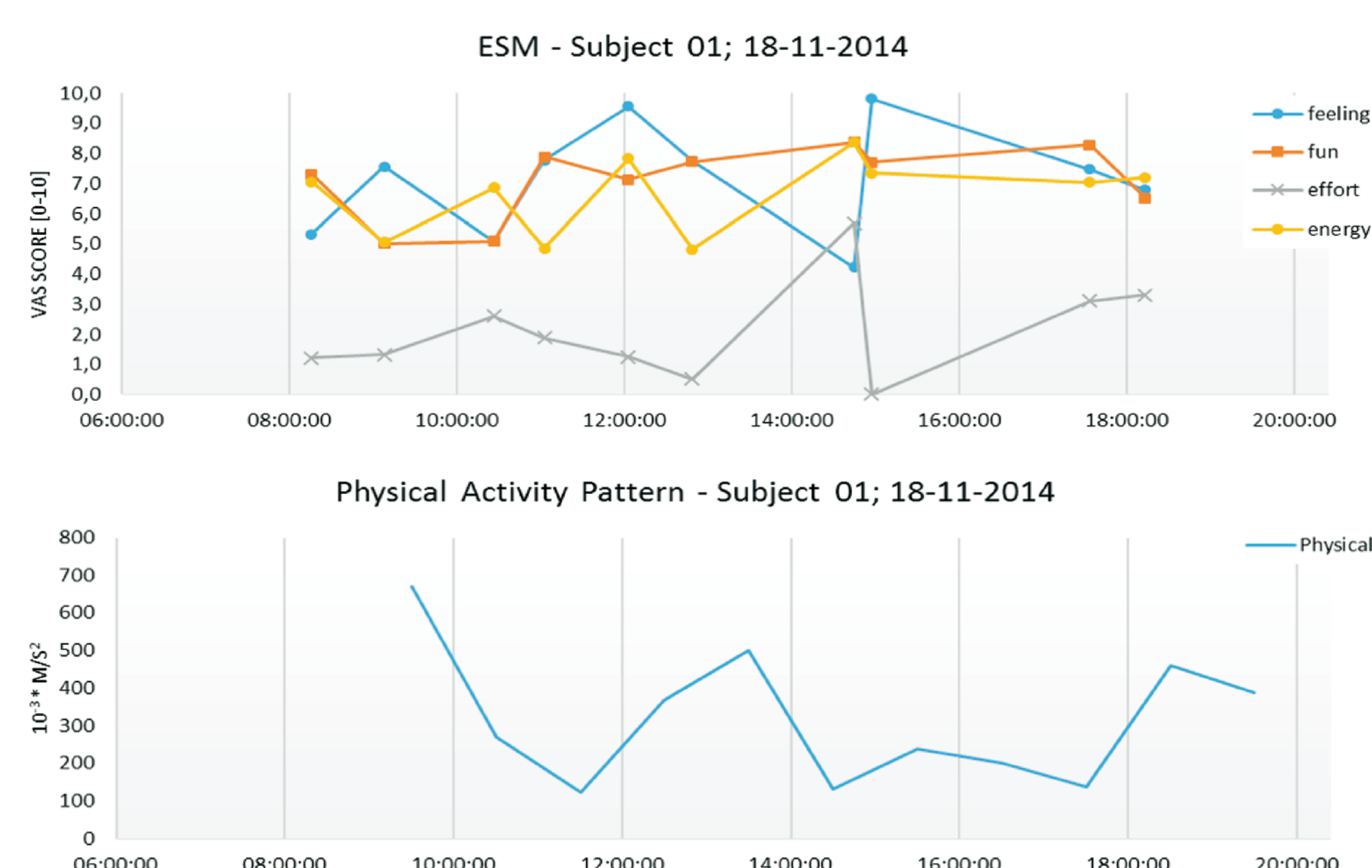
$$\text{Satisfaction} = 1.361 + 1.004 \text{ Fun_mean} - 0.956 \text{ Feeling_std}$$

Satisfaction = Satisfaction at the end of the workday

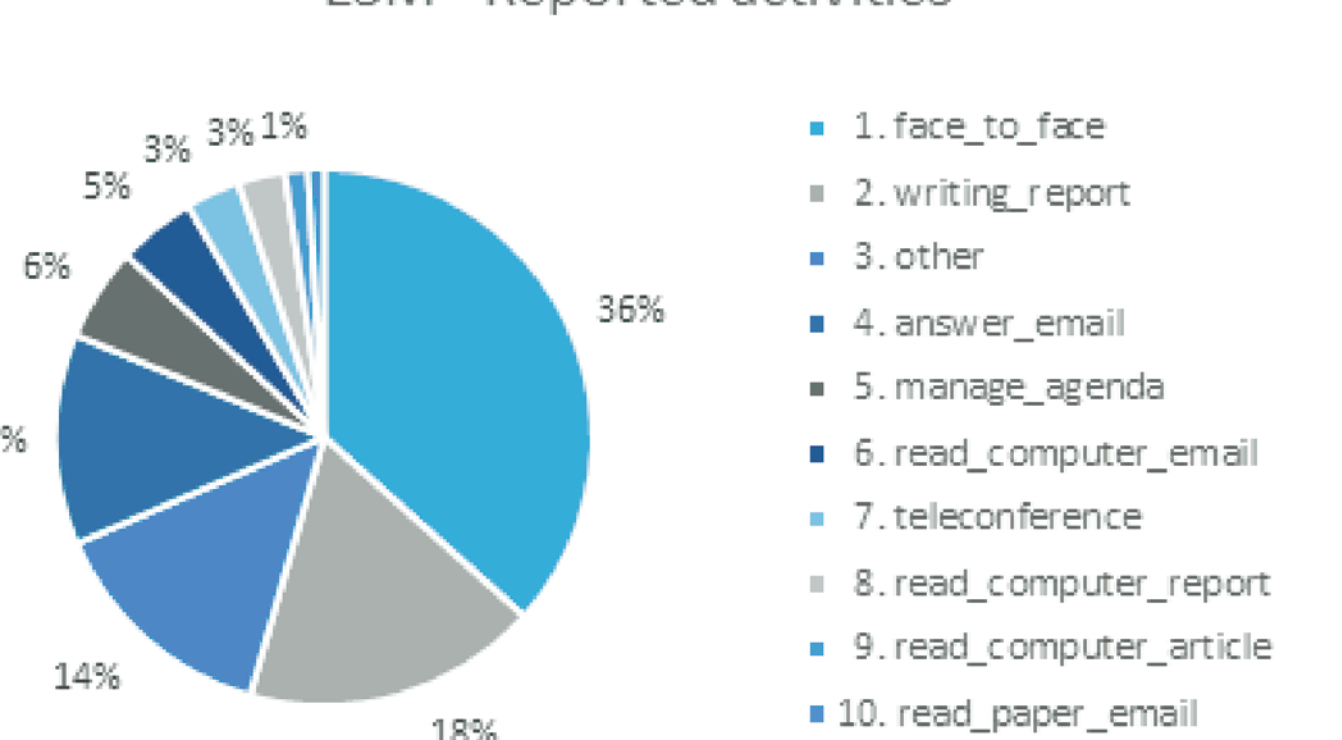
Fun_mean = Average level of fun over the day

Feeling_std = Fluctuations of feeling over the day (std)

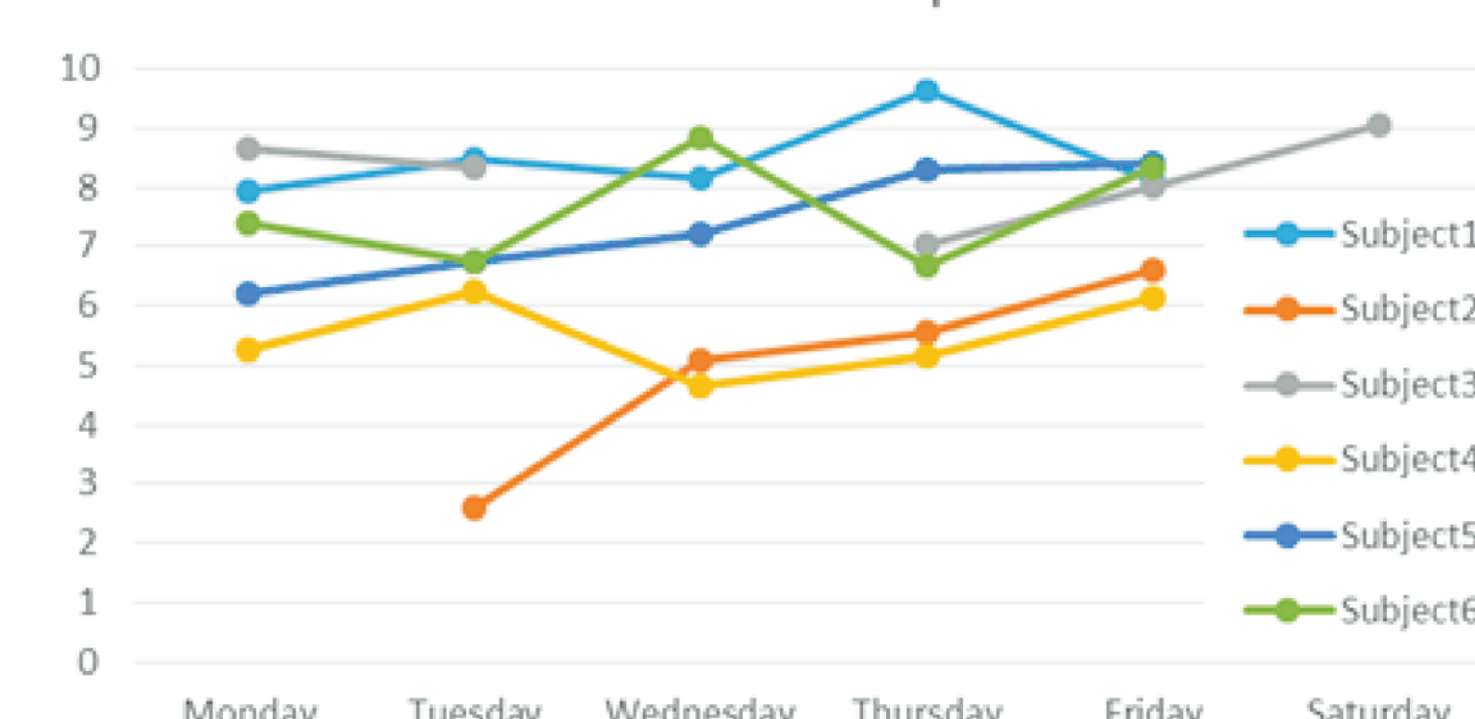
$$R^2 = 0.617$$



ESM - Reported activities



Satisfaction week profile



Conclusion and discussion

- The tool we developed is able to assess physical activity and simultaneously subjective experiences.
- This allowed us to investigate associations between work experience and physical activity patterns.
- Next, we will study correlations, working towards a model able to predict work satisfaction as a basis for individual work recommendations.



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