"A Survey Method for Characterizing Daily Life Experience: The Day Reconstruction Method"
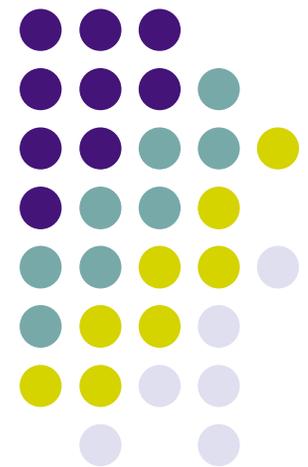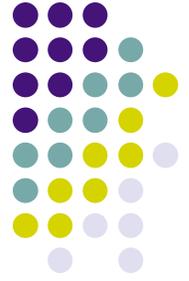
By Daniel Kahneman, Alan B. Krueger, David A. Schkade, Norbert Schwarz, Arthur A. Stone

In this article, the authors put forward a new method of measuring our daily affective experiences — our emotions at various moments throughout our day as we go about daily lif—namely the DMR or the Day Recostruction Method.

The standard test to date has been the ESM (Experience Sampling Method), a very labour intensive test.

ESM : Subjects wear beepers, and throughout the day, at irregular intervals, the beepers go off.

The subjects have to then record what they are doing and with whom, and what they felt or experienced at the time, given a list of possibilities.
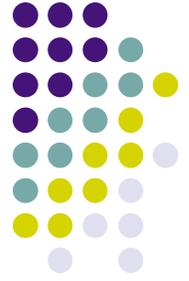
The Technique (IC)

"Respondents first answered demographic and general satisfaction questions. Next, they were asked to construct a short diary of the previous day: "Think of your day as a continuous series of scenes or episodes in a film. Give each episode a brief name that will help you remember it (for example, `commuting to work', or `at lunch with B'...). Write down the approximate times at which each episode began and ended. The episodes people identify usually last between 15 minutes and 2 hours. .....

Next, respondents answered structured questions about each episode: When it occurred (start and end times); what they were doing (by checking one or more of 16 activities); where they were; with whom they were interacting; and how they felt, using 12 affect descriptors, listed in Table 1. The affect scales ranged from 0 (not at all) to 6 (very much). Finally, respondents answered questions about their jobs and other personal details."
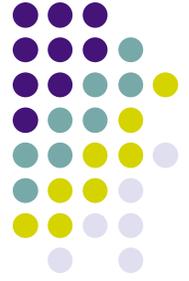
Note that 2 different kinds of "happiness" are being measured in this survey:

Life satisfaction: how happy you are with various aspects of your life (from the initial questions).

Affective response: the way you feel at a particular moment (from the reconstruction of your day).

One of the things which the authors are interested in, is the relation between these two kinds of happiness, between satisfaction and affect.
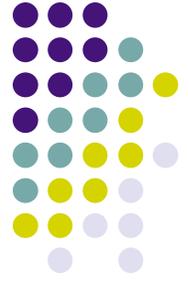
Why would you want to do this?

"Evoking the context of the previous day is intended to elicit specific and recent memories, thereby reducing errors and biases of recall (14, 15). Experience sampling is the gold standard to which DRM results must be compared; the DRM is intended to reproduce the information that would be collected by probing experiences in real time. The new method is more efficient than ESM: It imposes less respondent burden; does not disrupt normal activities; and provides an assessment of contiguous episodes over a full day, rather than a sampling of moments. Finally, the DRM provides time-budget information, which is not collected effectively in experience sampling."

- Easier for the subjects

- Gives a complete picture of the day as opposed to random parts

- Shows how people use their time — how much time is spent on which activities

THE SUBJECT POOL

"We demonstrate the method with a convenience sample of 1018 employed women, focusing on the subset of 909 who had worked on the reference day. The questionnaire and methodological details are available online (16). Completion times for the self-administered instrument ranged from 45 to 75 min. The ethnic composition of the sample was 49% white (non-Hispanic), 24% African American, 22% Hispanic, and 5% other. Average age was 38 years. Average household income was $54,700."

Mean affect rating

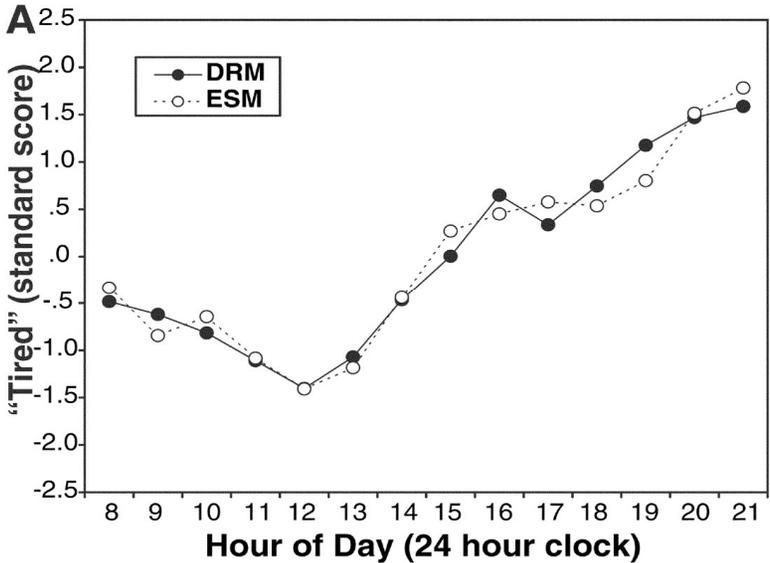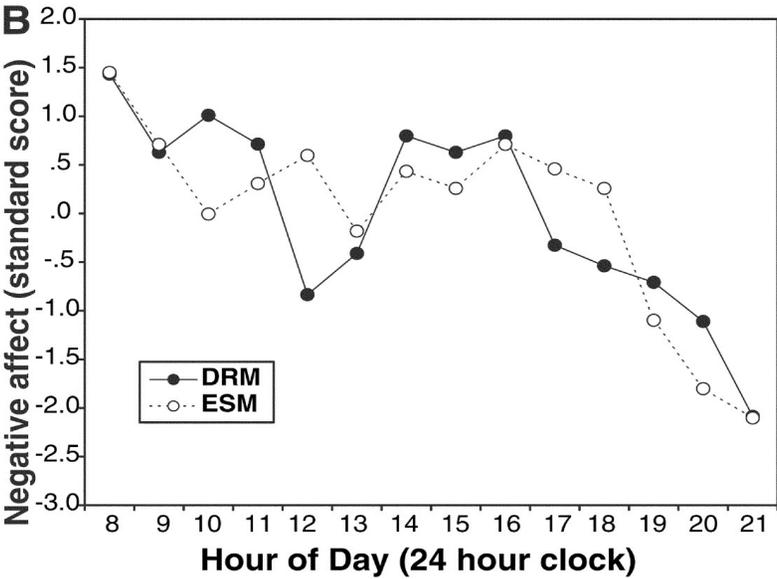|	Positive	Negative	Competent	Impatient	Tired	Mean hrs/day	%Resp.
Activities							
Intimate relations	5.10	0.36	4.57	0.74	3.09	0.2	0.11
Socializing	4.59	0.57	4.32	1.20	2.33	2.3	0.65
Relaxing	4.42	0.51	4.05	0.84	3.44	2.2	0.77
Pray/worship/meditate	4.35	0.59	4.45	1.04	2.95	0.4	0.23
Eating	4.34	0.59	4.12	0.95	2.55	2.2	0.94
Exercising	4.31	0.50	4.26	1.58	2.42	0.2	0.16
Watching TV	4.19	0.58	3.95	1.02	3.54	2.2	0.75
Shopping	3.95	0.74	4.26	2.08	2.66	0.4	0.30
Preparing food	3.93	0.69	4.20	1.54	3.11	1.1	0.62
On the phone	3.92	0.85	4.35	1.92	2.92	2.5	0.61
Care of my children	3.86	0.91	4.19	1.95	3.56	1.1	0.36
Computer/e-mail/Internet	3.81	0.80	4.57	1.93	2.62	1.9	0.47
Housework	3.73	0.77	4.23	2.11	3.40	1.1	0.49
Working	3.62	0.97	4.45	2.70	2.42	6.9	1.00
Commuting	3.45	0.89	4.09	2.60	2.75	1.6	0.87
Interaction partners							
Friends	4.36	0.67	4.37	1.61	2.59	2.6	0.65
Relatives	4.17	0.80	4.17	1.70	3.06	1.0	0.38
Spouse/SO	4.11	0.79	4.10	1.53	3.46	2.7	0.62
Children	4.04	0.75	4.13	1.65	3.40	2.3	0.53
Clients/customers	3.79	0.95	4.65	2.59	2.33	4.5	0.74
Co-workers	3.76	0.92	4.43	2.44	2.35	5.7	0.93
Boss	3.52	1.09	4.48	2.82	2.44	2.4	0.52
Alone	3.41	0.69	3.76	1.73	3.12	3.4	0.90
Duration-weighted mean	3.89	0.84	4.31	2.09	2.90		

Some interesting aspects of these results:

- People's affect tends to be overwhelmingly positive during the day.

- Although people report that there are certain activities that they dislike, such as housework and shopping, most people do not seem to have such a bad time while actually doing those activities.

- Thus, although childcare ranks about the same as housework, the housework is (oddly) an overwhelmingly positive experience.

Here, accuracy of the DRM is assessed by comparing it to the results of the ESM.

For our purposes, notice when women are most tired and grumpy.

A

"Tired" (standard score)

- DRM
- ESM

Hour of Day (24 hour clock)

Tiredness

B

Negative affect (standard score)

- DRM
- ESM

Hour of Day (24 hour clock)

Negative affect

Note: The times of day during which the subjects were most irritable (early morning) and most tired (tiredness increases steadily from noon on) coincides when working mothers are at home with their children.
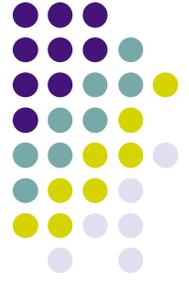
What is the relation of satisfaction to affect? Do they correspond or are they different?

"They differ in interesting and predictable ways from generic enjoyment ratings of the same activities. Juster (4) and Flood (9), for example, observed that interactions with one's children topped the list of enjoyable activities, followed by going on trips, being with friends, and working at one's job. Grocery shopping and cleaning the house were rated lowest among 28 activities. In Table 1, taking care of one's children ranks just above the least enjoyable activities of working, housework, and commuting. The contrasting results likely reflect the difference between belief-based generic judgments ("I enjoy my kids") and specific episodic reports ("but they were a pain last night"). The task of judging a category of events evokes instances that are prototypical but not necessarily typical, and discourages reports of socially inappropriate affect (14). These deficiencies are attenuated when respondents describe specific episodes, as they do in the DRM."

Do you think that this is the right explanation? That no one wants to report how little they enjoy their children?

Another Explanation:

Subjects were working mothers who were polled only on work days: they would have been tired, pressed for time, and irritable during the hours they spent with their children.

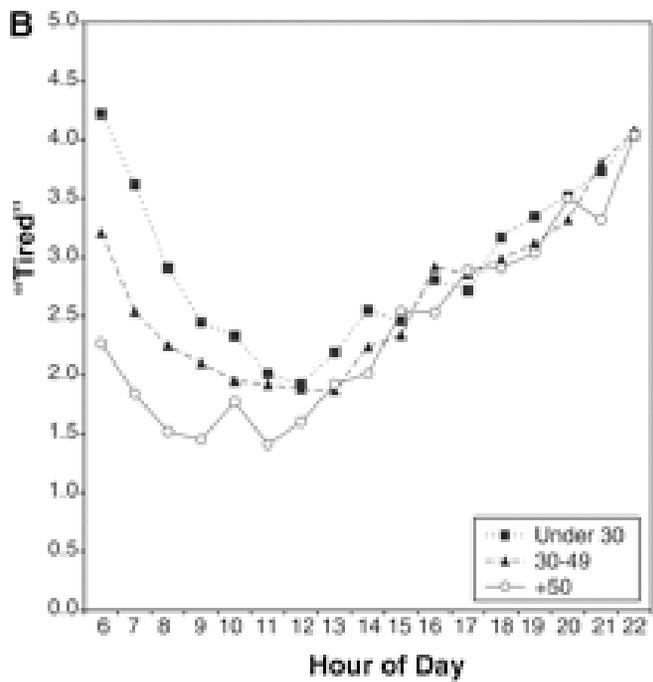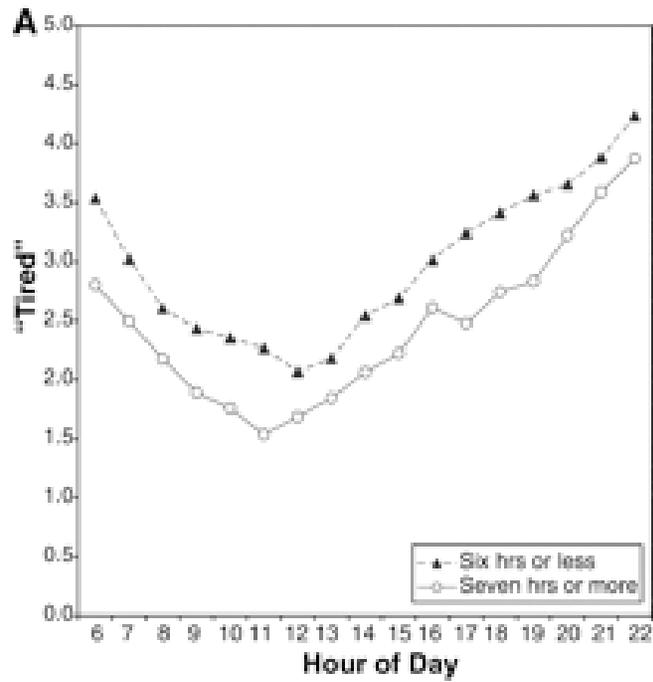It is unclear what the results would have been if the women had been polled on the weekends.
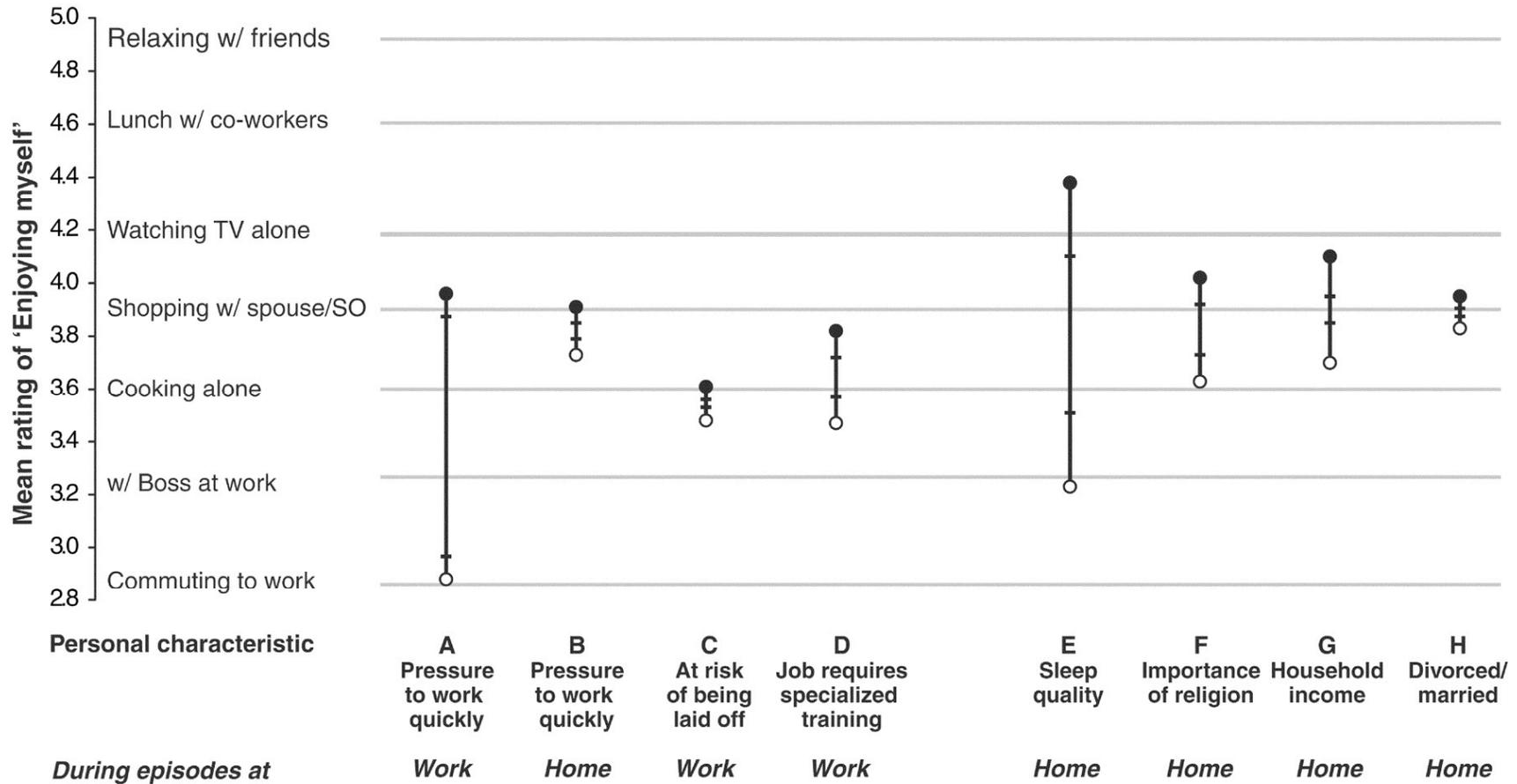
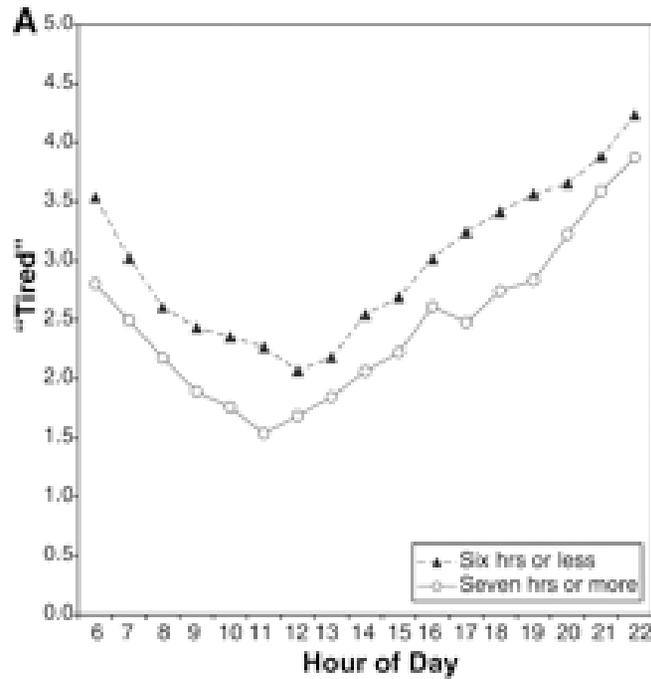What is the effect of personal characteristics on affect during certain activities?
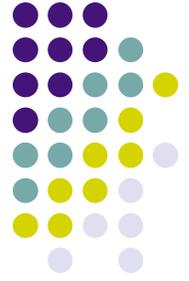
What had an effect upon the affect/emotional experience of the subjects regardless of activity?

What they found:

  a. Personal characteristics such as mild depression or poor sleep had a pervasive effect on affect.

  b. Local features of an interaction such as time pressure or person with whom you are interacting has a powerful influence on affect.

  c. Life circumstances have a relatively small effect on emotional experience unless one is affected by them in the moment (e.g. time pressure).

A

"Tired"

Hour of Day

Six hrs or less
Seven hrs or more

B

"Tired"

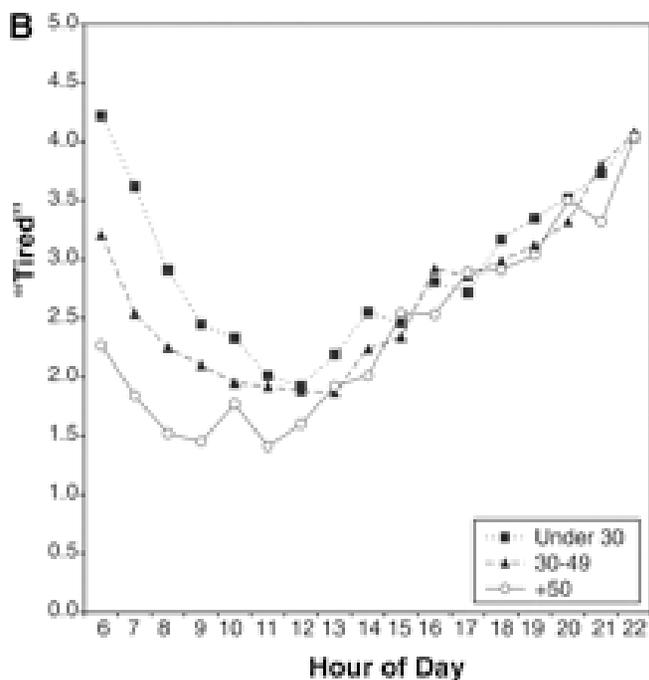Hour of Day

Under 30
30-49
+50

It is clear that the less sleep one gets, the more tired one is overall, in roughly the same pattern as those who sleep more.
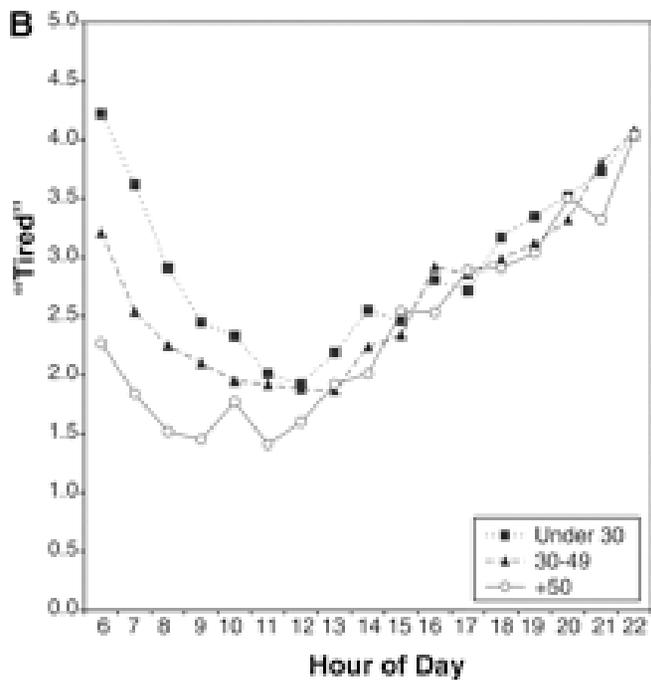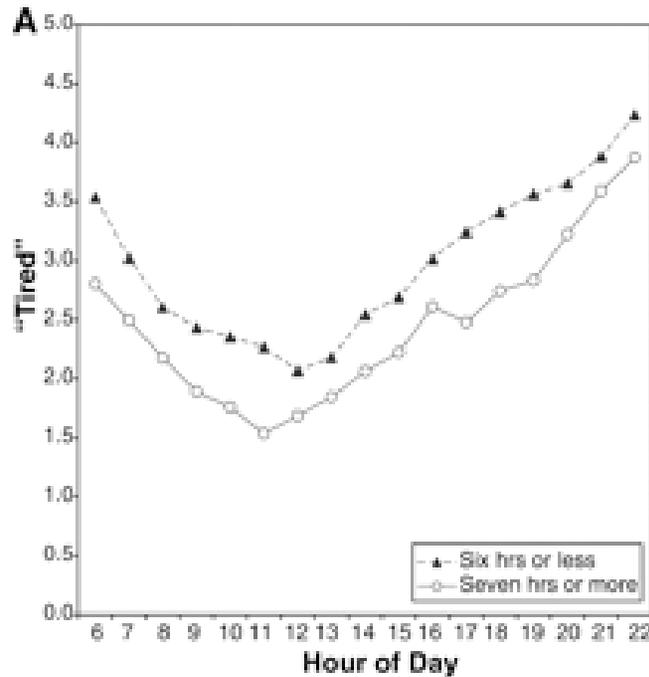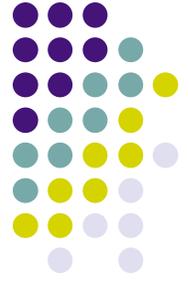
The less sleep one gets, the more tired one is overall, in roughly the same pattern as those who sleep more.

The younger the subjects, the more tired they are when they wake up in the morning.
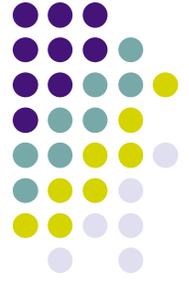
Another explanation…

If sleep is a major factor in how much one enjoys one's activities, then assuming that young mother's get less sleep and less uninterrupted sleep, this would certainly have an affect upon how much young mother's enjoyed their children on an average day and on all their other home activities.

We can assume then, that mothers with young children would have overall more negative scores for home activities.

However, all of the non-mom activities that young mother's do—such as cleaning, shopping, etc. would be averaged with all those non-mothers in the study (thus lowering the average somewhat). But the child-related activities are ONLY performed by mothers, so those activities would not be combined with the somewhat more positive scores of the non-mothers. Hence, they would have a lower positive rating.

That is, by counting everyone together, we cannot see how mothers' feel about their time with children; the lesser score could be the effect of not having enough sleep, not of the activity itself.

And yet another explanation..

What do you think the relation is between life satisfaction with an activity and emotional reaction to particular instances of the activity— I.e. your satisfaction with your interactions with your children versus your actual emotional reactions during a given interaction with your children?

Consider the examples below and ask yourself what the differences in overall satisfaction and moment to moment happiness would be for people with different kinds of employment.

How would each person rank their overall satisfaction compared to what each person feels while doing the work-related activity given?

E.g. Might a criminal court judge express high satisfaction and yet not feel terribly jolly when dealing with an unrepentant murderer?

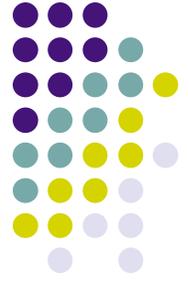| Overall Satisfaction	Emotional Reaction
Work (well paid Postie)	Delivering mail
Work (Criminal Court Judge)	Hearing a murder case
Work (minimum wage McD worker)	A day at McDonalds
Work (Physician, Doctors without Border)	Treating children in Rwanda

What does this tell you about the relation between life satisfaction and individual emotional reactions?

Could a person be very satisfied with his or her difficult job and yet,while doing that job, experience some very negative emotions?

Conversely, could a person be very unsatisfied with his or her current job (and be actively trying to train for something else) and yet, while working, feel more or less positive?