PhilSHIFT and its Filipino chronotype survey: Using science for inclusive growth and development

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PhilSHIFT Research

Chronotype-specific adjustment to shift work of contact center agents in the Philippines

Project 1: Chronotype surveys of Filipinos

http://philshift.upm.edu.ph/

What is the BODY CLOCK?

Imagine that:
• your body has a collection of clocks
• each body organ has its own clock
• every organ has its own timing according to its clock
• all the clocks follow the pace set by a Master Clock
  → suprachiasmatic nucleus (SCN) or “circadian pacemaker”
The body clock telling time

- the body clock guides all organs to keep track of the 24-hour external time period (time of day)
- zeitgebers (Ger. “time givers”): clues that tell us the time
  - wristwatch time, work schedule, culture and meals
  - environmental temperature and light-dark cycle

Body clock, Chronotype and Entrainment

- body clock adjusts to follow the 24-hour day period
- Entrainment refers to the continuous adjustment of the Circadian System to “match” external time
- relationship between body clock and external time vary among individuals, and different types are called chronotypes

Which chronotype are you?

- “larks” and “owls”; early or late persons
- based on middlemost time of sleep:
  - Munich Chronotype Questionnaire (MCTQ)
  - Philippine Munich Chronotype Questionnaire (PhilMCTQ)
    - Early type: extreme, moderate, slight
    - Normal type
    - Late type: slight, moderate, extreme

Illustration from Nature
Vol 458, March 2009
Chronotype and... 

- Blood pressure
- Hormones (Melatonin and Cortisol)
- Body Temperature
- Physical activity, sleep and rest
- Scholastic and work performance
- Health

“About half of the population in industrialized society may have circadian rhythms that are out of phase with the daily schedule they keep.”

Internal Time, Well-being and Social Jetlag

What is social jetlag?

Social jetlag refers to discrepancies between free days and workdays, between social time and biological time ~ differences between what the social clock calls us to do and how the internal clock is set.

Internal time and school performance

Study period:
January-February 2009

Intervention: start of morning class moved from 0800 to 0830

Participation: 278 students at 9th-12th grades completed the surveys

Surveys before & after time change
• sleepiness
• morningness-eveningness
• objective data on missed appointments, tardiness, breakfast consumption

After the time change, the students
• were less likely to report not getting enough sleep or not being satisfied with their amount of sleep
• said their sleepiness was less
• that visited the health clinic lessened
• had less missed morning appointments
• requested fewer late passes
The authors of the paper said:

“*A modest delay in school start time was associated with significant improvements in measures of adolescent alertness, mood, and health.*

*The results of this study support the potential benefits of adjusting school schedules to adolescents’ sleep needs, circadian rhythm, and developmental stage.*”

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The body clock and shift workers

*They were all about working in:*
- Call center
- Hospitals
- Semi-conductor company
- Hotels and restaurants
- Educational & financial institutions
- Manufacturing (yarn)

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Some potential outputs of PhilSHIFT Project 1

- chronotype profile of key contact center cities (Metro Manila, Metro Cebu, Metro Clark and Metro Davao)
- data on age, sex, and outdoor light exposure
- PhilMCTQ-Shift: chronotype questionnaire for shift workers in the contact center industry
- revised English versions of the PhilMCTQ and PhilMCTQ-Shift launched through the Worldwide Experimental Platform (WeP)
- Filipino versions of the PhilMCTQ and PhilMCTQ-Shift

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Other research projects of PhilSHIFT

**Project 2 - Chronotype-specific adjustment to shift work of new contact center agents**

- Prospective cohort study

Sleep and activity of Philippine contact center employees who work in a circadian light environment (project-in-development)

- Light as an intervention for adjustment to shift work
PhilSHIFT invites you to participate in the Filipino chronotype survey!

Answer PhilMCTQ and get to know your body clock.

Web philshift.upm.edu.ph
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Follow the PhilSHIFT and the Filipino chronotype survey

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