

A WEB-BASED SYSTEM FOR SLEEP DISORDERS MANAGEMENT



G. Varoneckas¹, A. Zilinskas², A. Varoneckas²,
A. Podlipskyte¹, A. Martinkėnas¹

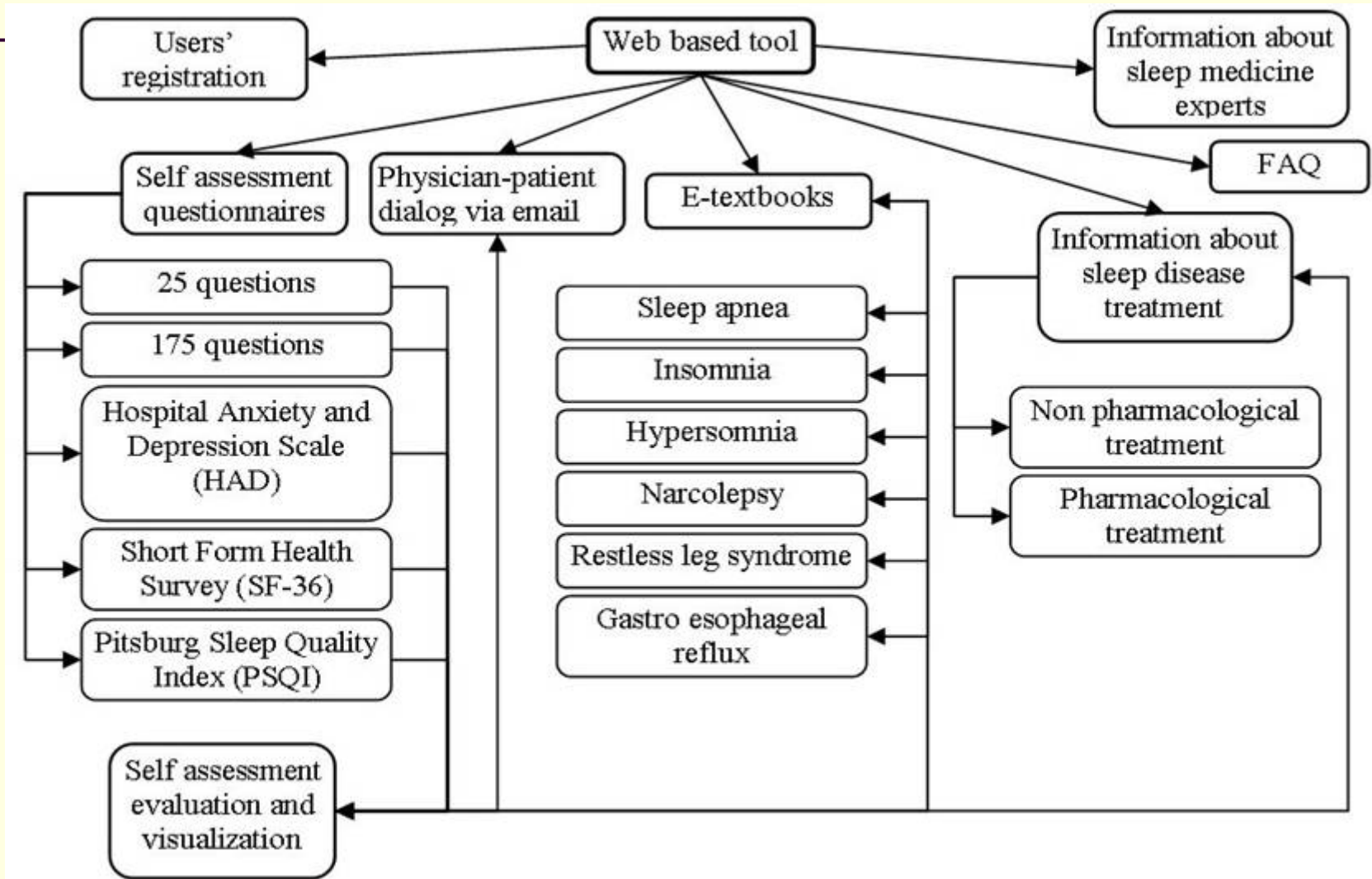
¹*Institute Psychophysiology and Rehabilitation , Palanga, Lithuania*

²*Vytautas Magnus University , Kaunas, Lithuania*

The goal of the study

- was development of a public Web-based tool for self-assessment of sleep disorders, specialized diagnostics, treatment regimens, education and consultations with physician on sleep disorders

Structure of the Web based system



System configuration

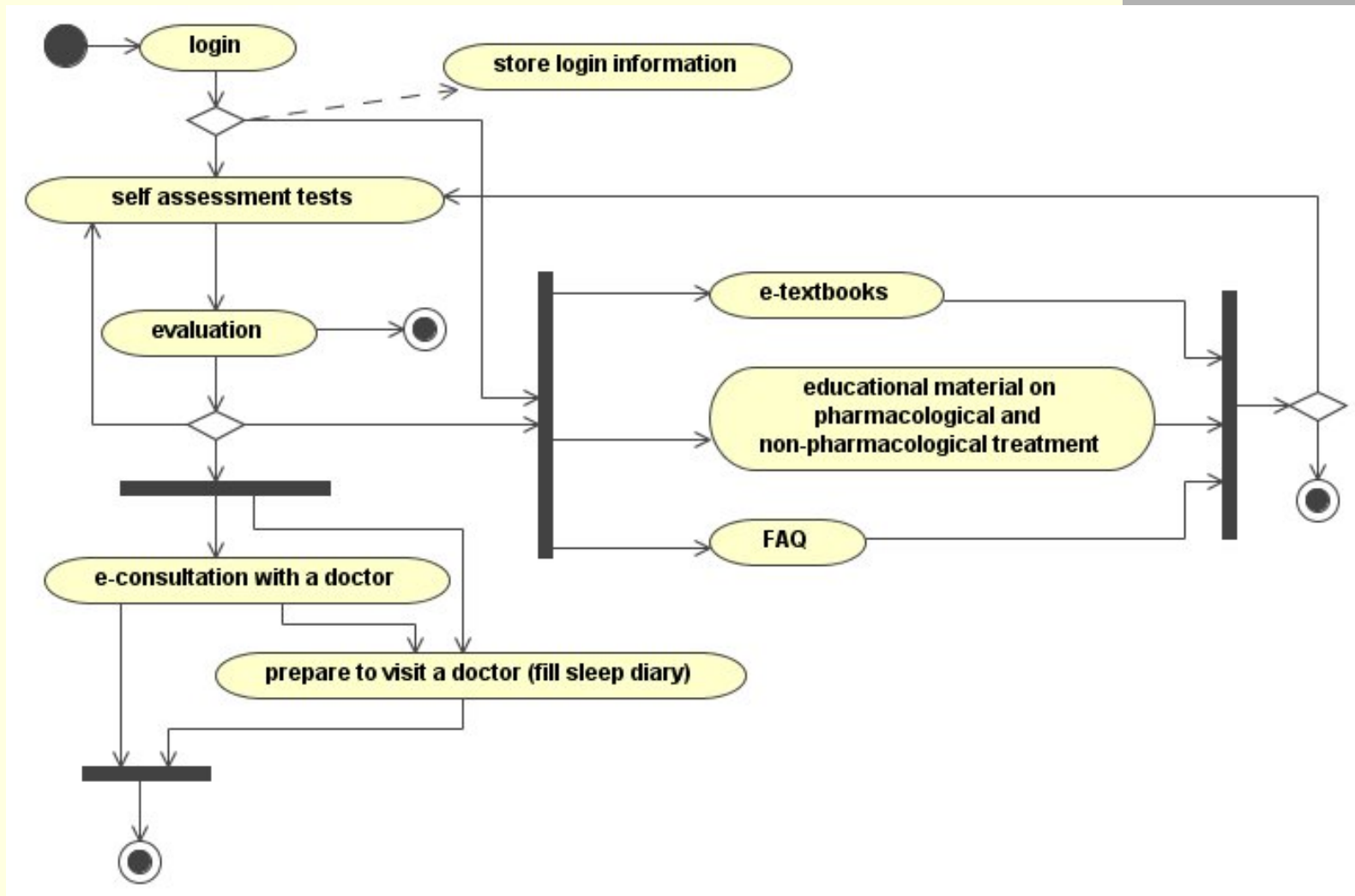
- Linux – based web/database server

- Apache web server
- PHP script language
- Octave
- MySQL database


- Expert system

- Knowledge base (linguistic “IF...THEN...” rules)
 - Fact base
 - Rule base
- Inference mechanism

User activity diagram



Self assessment using HAD scale

 **KMU Psichofiziologijos ir reabilitacijos institutas**

Miego medicinos centras

Naujienos | **Miego ligos** | **Gydymas** | **Registracija** | **Kontaktai**

RĖMĖJAI:
sanofi-synthelabo

Vardas: 12313 Pavardė: 564156 Tyrimo data: 2005 3 24

	Balų suma	Įvertinimas
Nerimas	15	Labai išreikštas nerimas
Depresija	15	Depresija labai išreikšta



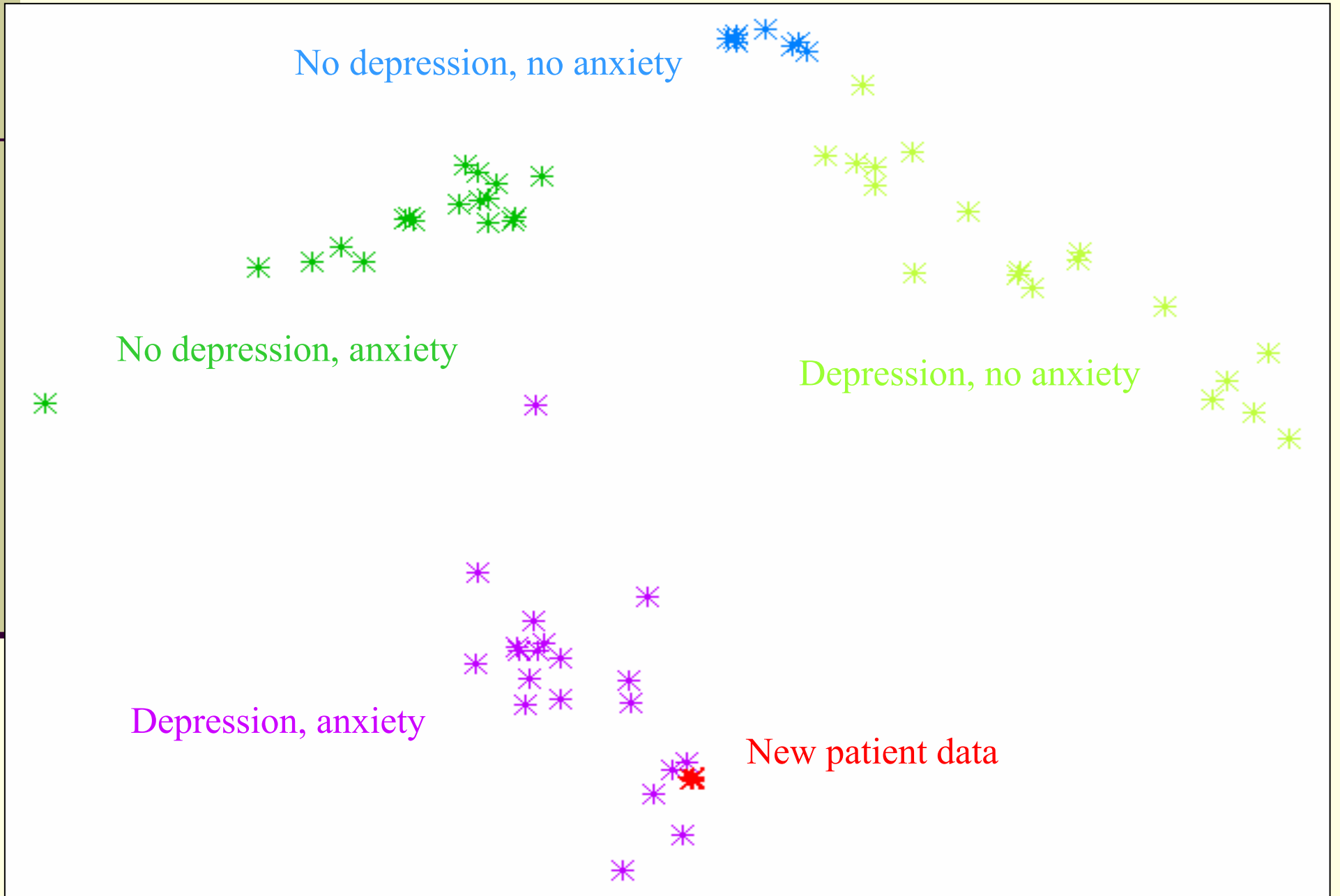
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Lietuva

Self assessment using HAD scale

Anxiety **YES (15)**

Depression **YES (15)**





Self assessment using PSQI



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RĖMĖJAI:
sanofi~synthelabo

Vardas: *kjfds* Pavardė: *kjhdjkds* Tyrimo data: 2005 3 25

Pitsburgo miego kokybės indeksas (PMKI): 16

PMKI komponentų įvertinimai:

Subjektyvus miego kokybės vertinimas:	2
Užmigimo trukmė:	1
Miego trukmė:	3
Miego efektyvumas:	3
Trukdymai miegui:	2
Migdomųjų vartojimas:	3
Aktyvumo problemos dienos metu:	2

Self assessment using PSQI

The Pittsburgh Sleep Quality Index (PSQI) 16

Subjective sleep quality	2
Sleep latency	1
Sleep duration	3
Habitual sleep efficiency	3
Sleep disturbances	2
Use of sleeping medication	3
Daytime dysfunction	2



Conclusions

- A Web-based tool combining e-learning, expert system and tele-medicine techniques is useful to enhance the health care of patients suffering from sleep disorders
- Visualization of assessment of sleep quality and psychoemotional status by means of multidimensional scaling improves explanatory possibilities of the expert system.