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SUPPORTING HEALTH LITERACY OF CHILDREN

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Empower Kids
Jurmala 2017

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BACKGROUND

- Term “health literacy” was first used in 1974
- After 1992 the use of health literacy has increased and the importance of health literacy for public health and healthcare is growing
- The majority of research literature on health literacy has been published since 2005

(Speros 2005 ; Sørensen et al. 2012)

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DEFINITIONS OF HEALTH LITERACY

- There are several different definitions and models of health literacy
- **WHO** defines health literacy as" *the **cognitive** and **social skills** which determine the **motivation and ability** of individuals to **gain access** to, **understand** and **use information** in ways which **promote and maintain good health***"
- The definition includes two levels of actions:
    - Both **personal actions** (by changing personal lifestyles) and **actions towards community health** (by changing living conditions/determinants of health)

(WHO 1998)

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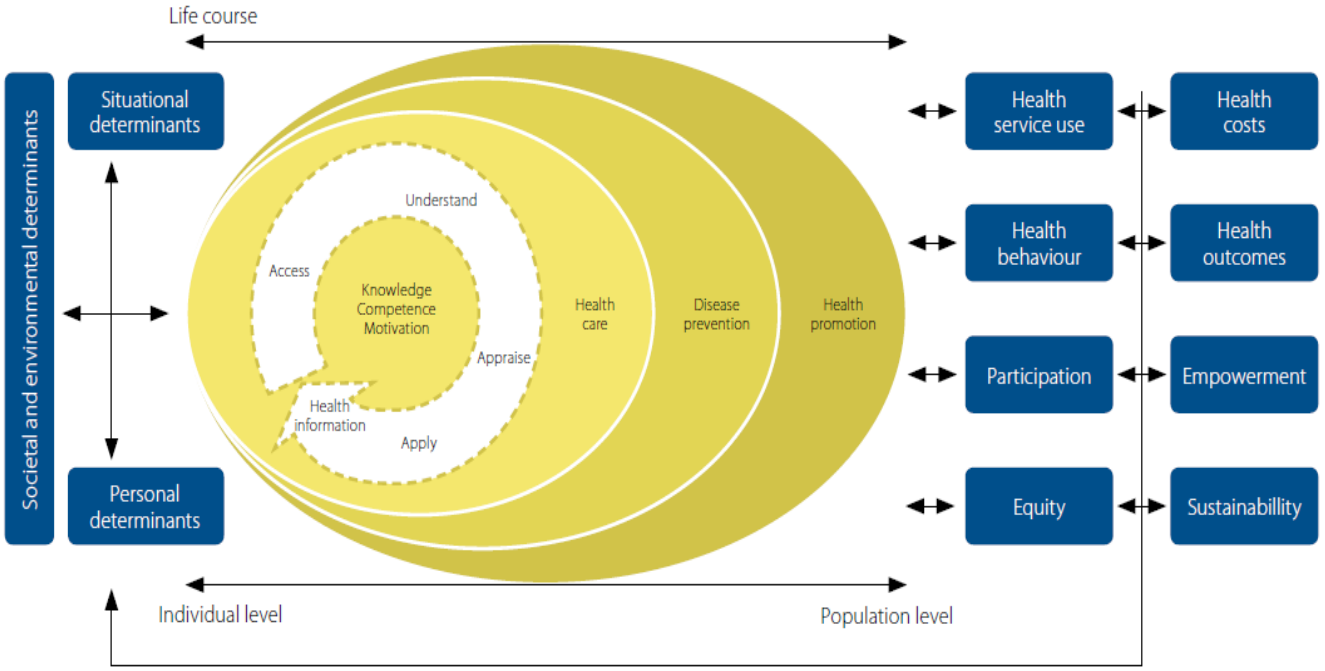
EXAMPLES OF HEALT LITERACY MODELS

Fig. 2. Conceptual model of health literacy of the European Health Literacy Survey



Source: adapted from: Sørensen K et al. Health literacy and public health: a systematic review and integration of definitions and models. *BMC Public Health*, 2012, 12:80.

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LEVELS OF HEALTH LITERACY

- Health literacy can be defined as a three level concept
  - **Level 1: *Functional health literacy*** *(Basic skills)*
    - Communication of factual information on health risks and how to use health services
  - **Level 2: *Interactive (or communicative) health literacy*** *(More advanced skills)*
    - Focused on the development of personal and social skills (especially motivation and self-confidence) to act on the advice received
  - **Level 3: *Critical health literacy*** *(Most advanced skills)*
    - Directed towards improving individual and community capacity to act (social and political actions) on the social, environmental and economic determinants of health

(Nutbeam 2000)

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HEALTH LITERACY AS AN OUTCOME AND A MEDIATOR

- Health literacy is a key outcome of health education
- Health literacy is related to health behaviors
    - Health literacy predicts health status and outcomes more strongly than age, income, employment status, education level and race or ethnicity
- Increased health literacy may lead to equity and sustainability in public health and may help to reduce health disparities
- By improving people's access to health information, their capacity to use it effectively, and by fostering participation, health literacy is also critical to empowerment

(Nutbeam 1998; 2000; Brown et al. 2007; Manganello 2008; DeWalt & Hink 2009; Higgins et al. 2009; Sørensen et al. 2012)

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CERTAIN GROUPS ARE MORE VULNERABLE

- Health literacy depends on
  - **Previous knowledge**, **values** and **attitudes** toward health
  - **Previous experiences** (e.g. prior experience with illness, healthcare system or exposure to health-related language)
  - **Personal factors** (e.g. age, gender, background, socioeconomic status, education, occupation, employment, income, cognitive development, social skills, basic literacy and numeracy skills)
  - **Societal and environmental factors** (i.e. demographic situation, culture, language, political forces, societal systems)
  - **Situational factors** (e.g. social support, family and peer influences, media use and physical environment)

(Nutbeam 2000; Speros 2005; Magnanello 2008; Higgins et al. 2009; Sørensen et al. 2012)

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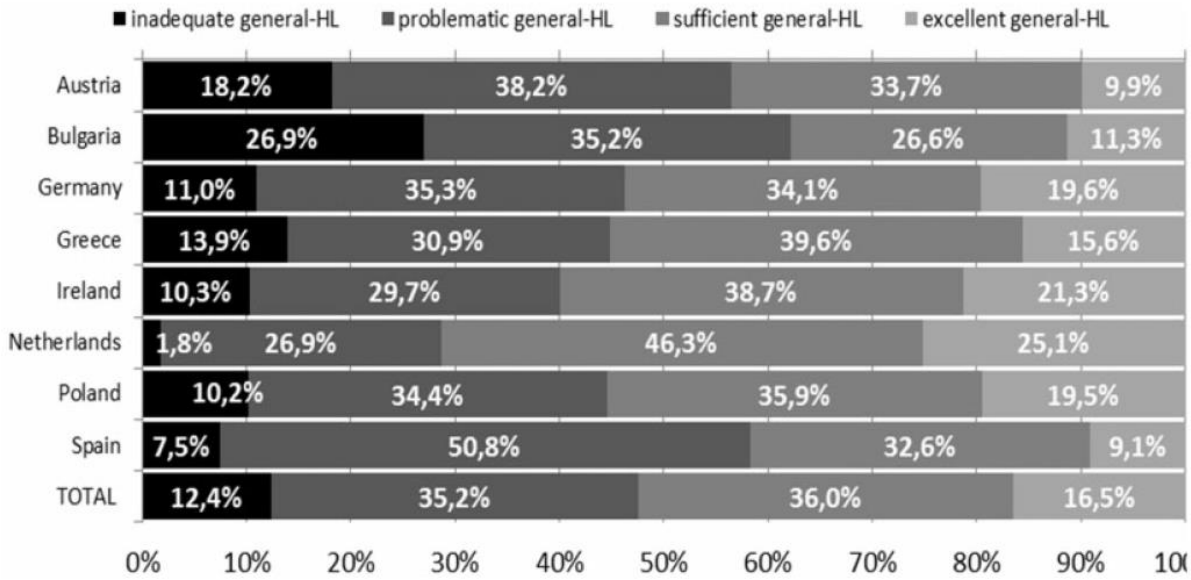
COUNTRIES VARY GREATLY

- 1 out of 10 participants (12.4%) had inadequate health literacy
- However, this proportion varied between 1.8 and 26.9% by country



(Sørensen et al. 2015)

GROUPS THAT NEED SPECIAL ATTENTION

- People with
  - poor health status
  - high use of health care services
  - low socio-economic status
  - lower education
  - older age *(Sørensen et al. 2015)*
- Children and adolescents *(Borzekowski 2009)*

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VULNERABLE GROUPS
Children from low income families

- *"The childhood poverty rate is a vital indicator of children's well-being"*
- *"The child poverty rate is a key indicator of a society's health and well-being*"

Chaudry & Wimer 2016

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Children from low income families
outcomes from poverty

Indicator	Percentage of Poor Children	Percentage of Nonpoor Children	Ratio of Poor to Nonpoor Children
Physical health conditions/outcomes (for children between 0 and 17 years and in year 2014)			
Reported to be in excellent health	48.9%	66.9%	0.7
Reported to be in fair to poor health	3.2%	0.8%	4.0
Uninsured for health care	6.2%	3.5%	1.8
Currently has asthma	11.0%	8.2%	1.3
Obesity (ages 2–19 years; 2009–2012)	21.2%	15.7%	1.4
Made 1 or more emergency room visits in past 12 months	24.4%	12.7%	1.9
Missed 11 or more school days in past 12 months because of illness or injury (ages 5–17 years)	4.8%	2.9%	1.7
Developmental conditions/outcomes			
Learning disability (ages 3–17 years)	10.1%	5.3%	1.9
Serious emotional or behavioral difficulty (ages 4–17 years; 2012)	7.8%	4.5%	1.7
Education conditions/outcomes			
Grade repetition (reported repeated a grade; ages 6–17 years)	18.0%	7.8%	2.3
Receiving special education or early intervention services (ages 0–17 years)	10.4%	6.2%	1.5
School-aged child with IEP (ages 6–17 years; 2012)	14.4%	10.6%	1.4
Attends unsafe school (reported child is never or sometimes safe at school)	15.1%	5.3%	2.8
High school dropout (percentage of 16- to 24-year-olds who were not in school or did not finish high school in 2013)	10.7%	5.7%	1.9
Food and nutrition conditions/outcomes			
Food-insecure children (report 3 or more food-insecure conditions among 18 questions)	25.0%	6.0%	4.2
Children with very low food security (report 8 or more food-insecure conditions among 18 questions)	3.5%	0.4%	8.8
Other			
Woman who had 1 or more teen, unmarried births	27,00 %	4,00 %	6.8
Woman who had 1 or more unmarried births (before age 30 years)	42,00 %	10,00 %	4.2
Man, ever arrested (before age 30 years)	21,00 %	14,00 %	1.5
Annual earnings at age 30 years	30,500$	52,300$	0.6

Chaudry & Wimer 2016

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WHAT NEEDS CONSIDERATION WHEN PROMOTING HEALTH LITERACY?

- Need for re-evaluation of current health education practices (both content and methods)
  - Supporting health literacy is more than transmitting information
  - Tailoring health education based on individual capacities
  - In addition to supporting skills needed to access, understand, appraise and apply information, attention needs to be paid to the manner how the information is presented (Rudd 2013)

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SPECIAL ASPECTS WITH CHILDREN AND ADOLESCENTS

- The majority of previous health literacy research in concentrated on adults (e.g. caregivers)
- Already young children can seek, comprehend, evaluate and use health information
    - The materials need to be age appropriate, culturally relevant and socially supported
- Health education designed to children should:
    - Increase their interest in health issues
    - Promote their self-efficacy in controlling their own health destinies
    - Be easy to understand

(Brown et al. 2007; Borzekowski 2009)

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WHAT IS KNOWN TO WORK

1. Build the foundations for health literacy in early child development
2. Develop and support health-promoting schools approaches
3. Addressing the barriers to adult learning
4. Combined and tailored approaches work best
5. Participatory approaches are promising
6. Exploring new learning approaches for health and well-being

(Kickbusch et al. 2013)

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WHAT NEEDS SPECIAL ATTENTION

- Broaden intervention development and evaluation outside of health care setting *(Nutbeam 2012)*
- Evaluate which interventions are best suited to developing health literacy for individual behaviours especially in vulnerable populations *(Taggart et al 2012)*
- Recognize and explore the potential of eHealth *(Nutbeam 2012)*
- Develop and evaluate interventions for children (*Brown et al. 2007; Manganello 2008; DeWalt & Hink 2009*)

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WHAT NEEDS SPECIAL ATTENTION 2

- The challenge of measurement *(Taggart et al 2012)*
  - There is need to develop and validate better instruments for measuring health literacy (particularly interactive and critical health literacy)
- Conceptual confusion *(Nutbeam 2012)*
  - ”Health literacy has become fashionable”
  - The concept is used without deeper understanding of the concept

  -> Diversity of interventions

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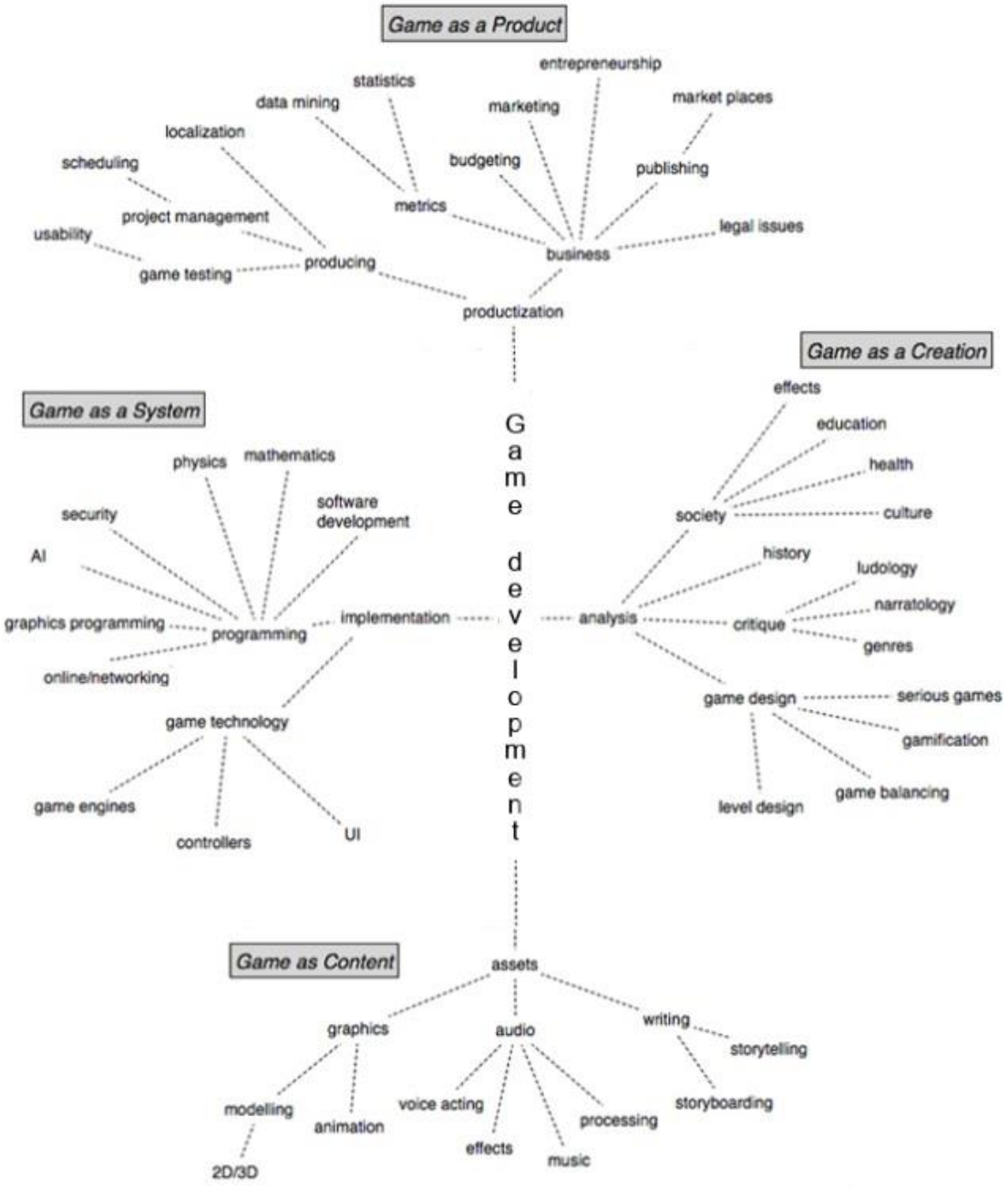
DIFFERENT APPROACHES FOR RESEARCH

- **Game as Content** focuses on the artistic assets (e.g. graphics, animation, audio, storyboard)
- **Game as a Creation** focuses on the analysis of games in different contexts and on the design of games (e.g. implementing the health promotion theory)
- **Game as a System** focuses on the implementation of the game mechanics and interfaces utilizing game technology (e.g. game engines)
- **Game as a Product** focuses on the productization of a game (e.g. the production process, marketing and business aspects)



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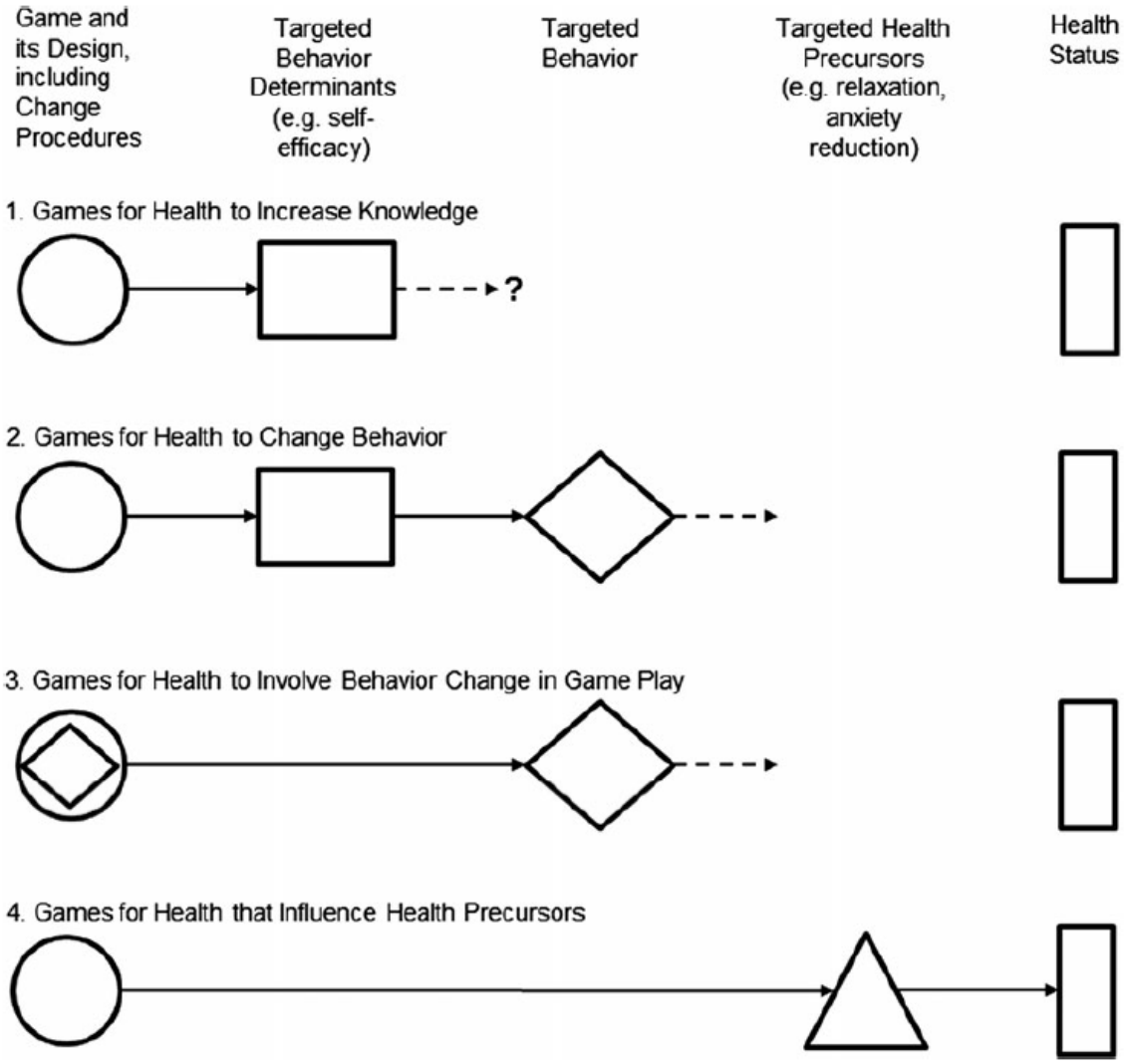

FIG. 1. Four types of games for health.

(Baranowski et al. 2015)

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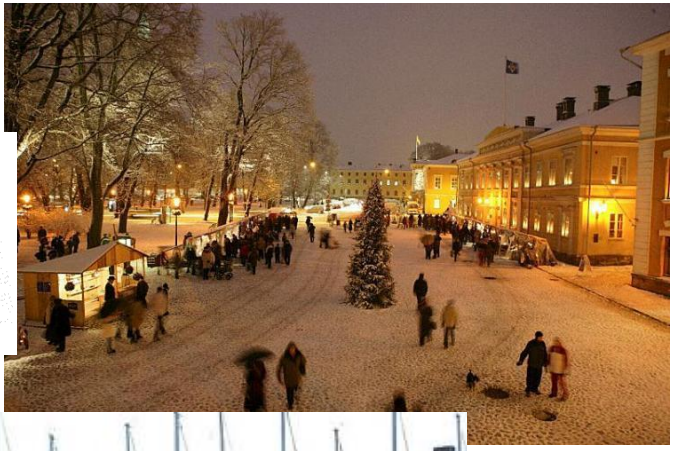
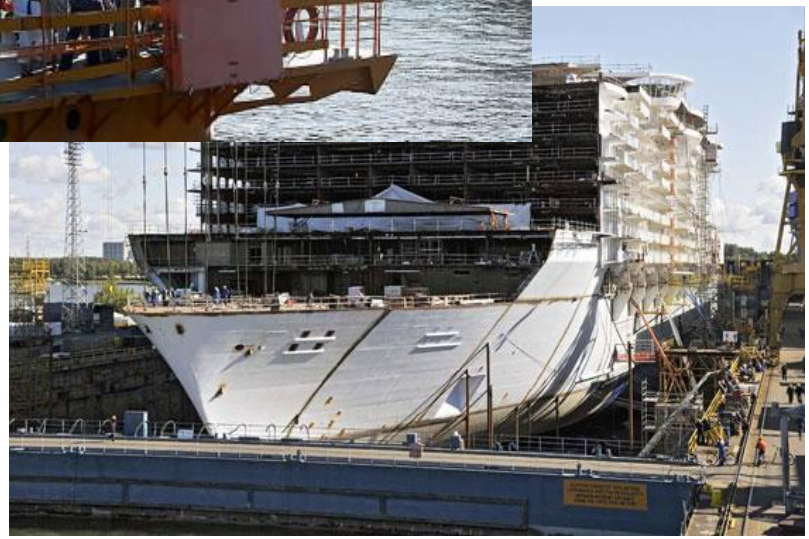
KISS MY TURKU





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T E P E
Research Group on Health Games