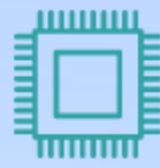




Are You Serious?!

An Inventory Study at Adolescents Perspectives regarding Physical Activity and Serious Gaming

Introduction



'What are the views of adolescents, aged 12 to 18, regarding Physical Activity and (Serious) gaming behaviour?'

Serious Gaming: 'a game that wants to do more than just entertain the player, normally by increasing knowledge or teaching new skills through gameplay'

eHealth interventions are an effective transfer method for the stimulation of Physical Activity among adults of various ages

Risk factors for sedentary behaviour

- o Low level of self-control
- o Lower problem solving capacity
- o Lower goal setting capacity
- o Lower planning capacity

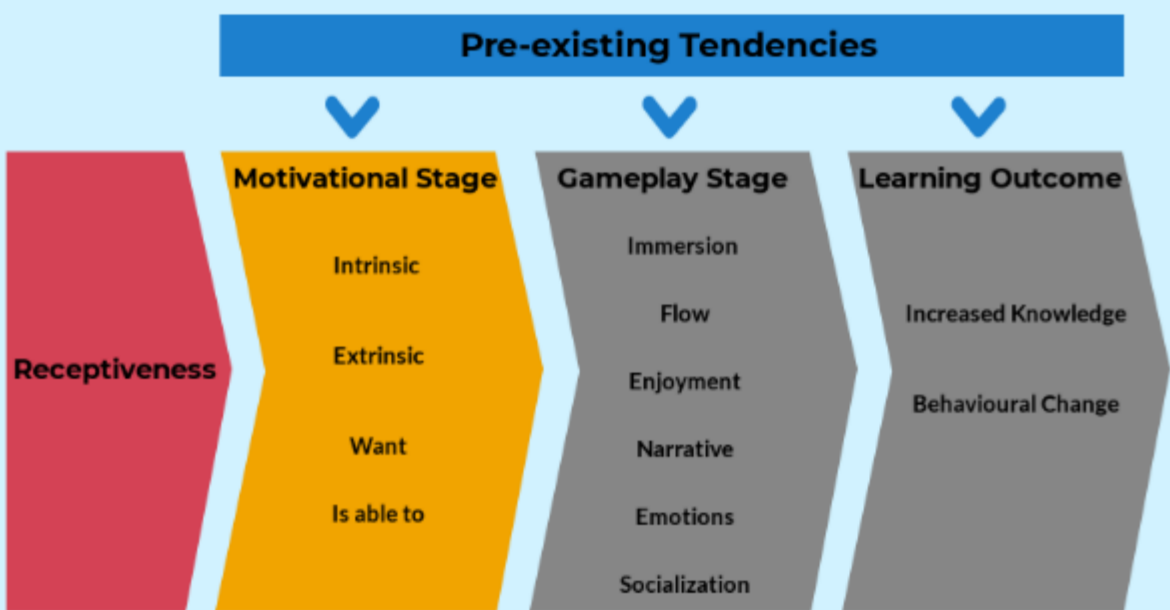
Adolescents are influenced by changing factors like:

- o Hormones
- o Body development
- o Social acceptance
- o Peers (friends)

Weekly sports participation decreases at the age of 12

Only 31% of the Dutch adolescents reaches the Dutch Physical Activity Guideline (DPAG)

Design



A self-conducted online questionnaire was prompted at adolescents.

- Topics:
- o Physical activity behaviour
 - o Thoughts about Physical Activity
 - o Gaming behaviour
 - o Thoughts about gaming
 - o Thoughts about use of technology and Serious Gaming
 - o Serious Game design

Educational Behavioural Change Game Enjoyment Model (EBC-GEM)

Results

Descriptive Statistics of study population (N = 91)		M (SD)
Age		16.19 (1.31)
Participation in sports (times/ per week)		3.34 (1.41)
Gender	n (%)	
	Male	50 (54.9)
	Female	41 (45.1)
Nationality	Dutch	84 (92.3)
	Non-Dutch	7 (7.7)
Educational Level	Havo-Vwo (transitional class)	3 (3.3)
	Basis/Kader	4 (4.4)
	Mavo	5 (5.5)
	Havo	32 (35.2)
	Vwo	44 (48.4)
	Other	3 (3.3)

Discussion



91 Adolescents Included

Equal Distribution of Gender

A Questionnaire Based on Existing Questionnaires

Less generalizability due to Homogeneity

Possible Bias due to Additional Knowledge of Respondents

Relatively few Dependent Variables

Perspective of Adolescents on their Physical Activity Behaviour (% of Agreement with Theorem)

	♂	♀
I meet the Dutch Physical Activity Guideline (Self-reported)	78%	56.1%
Physical Activity is in Favour of your Health	66.7%	82.1%
Preserving current Physical Activity Behaviour	56.3%	35.9%
Able to Change their Behaviour	65.5%	71.8%



74.3% Plays games 1 or 2 times per day



55.3% of the girls uses a smartphone to play games

Influence of Technology on Physical Activity

"Playing games can improve your knowledge (54.4% of the boys)"

"Playing games is not in favour of your health (1/3 of the adolescents)"

"Games do not help to be more Physically Active (67.5% of the adolescents)"

"Adolescents who like to play games believe that games can help (Pearson correlation: 0.481: P<0.0001)"

Key References

Fjællingsdal, K. S., & Klöckner, C. A. (2017). ENED-GEM: A Conceptual Framework Model for Psychological Enjoyment Factors and Learning Mechanisms in Educational Games about the Environment. *Frontiers in psychology*, 8, 1085. doi:10.3389/fpsyg.2017.01085

Hidding, L. M., Chinapaw, M., & Altenburg, T. M. (2018). An activity-friendly environment from the adolescent perspective: a concept mapping study. *The international journal of behavioral nutrition and physical activity*, 15(1), 99. doi:10.1186/s12966-018-0733-x

Conclusion

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Are you Serious?!

Adolescents assume that they meet the DPAG and therefore do not see the need to change their Physical Activity behaviour. They also do not assume that games and technology can support them to be more physical active, and claim that they are able to change their Physical Activity behaviour themselves but evidence shows otherwise. For them a Serious Game to increase Physical Activity is not the innovation they think they need.



Hogeschool van Amsterdam



VRJIE UNIVERSITEIT AMSTERDAM

Faculty of Science

Created by:
Studentnr:
VU Supervisor:
On-site Supervisor:

Koen Langeslag
2624634
Dr. Nina Cohen
Dr. Katja Braam