

Determinants of the use of digital media by older people. A comparative survey on the way to the development of a digital learning workshop

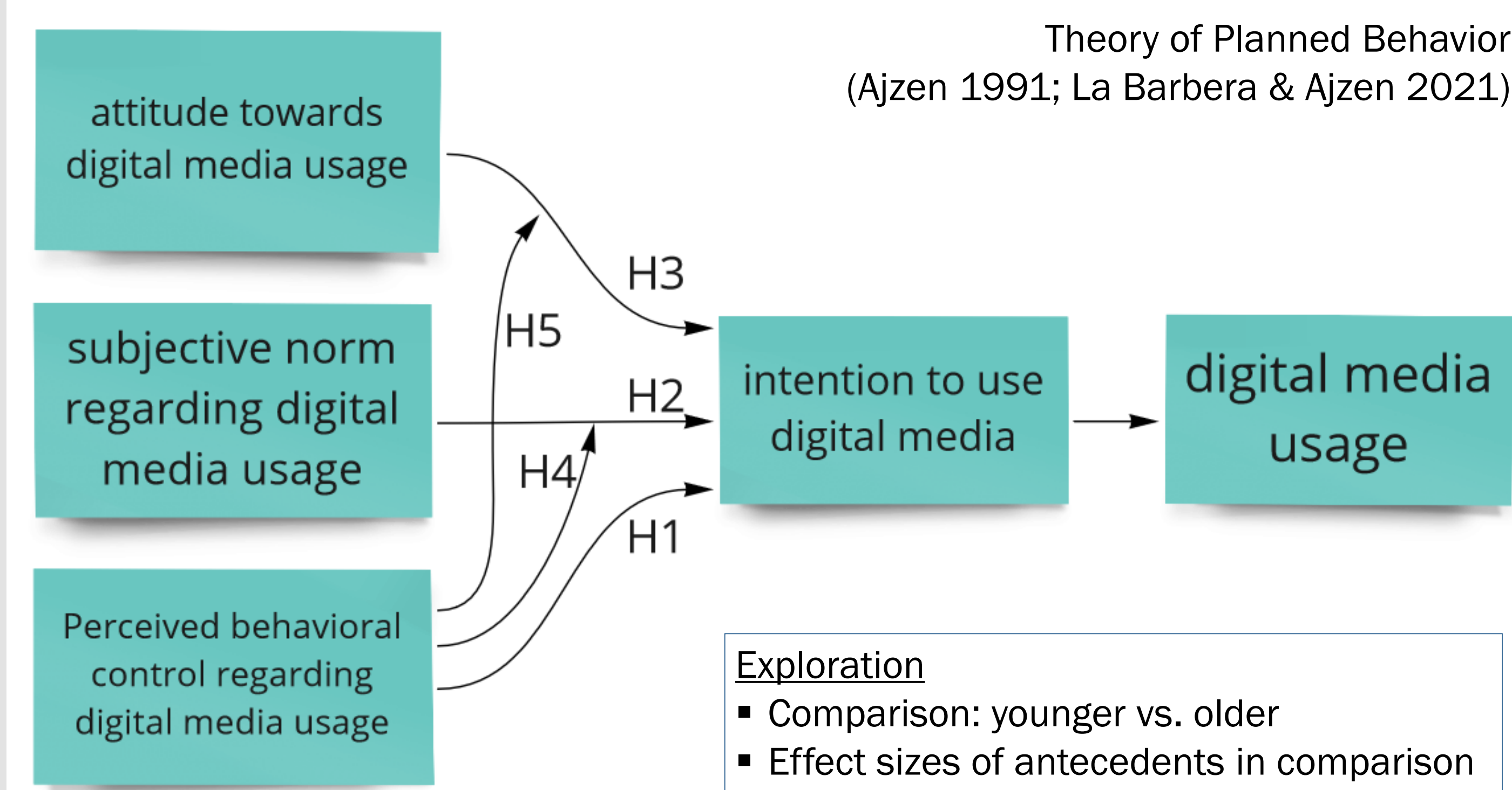
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1. Introduction and objectives

- Increasing digitalization in society
- Digitization offers opportunities for older people to be able to lead an independent and self-reliant life for as long as possible (The eighth ageing report of the Federal German government)
- Problem: digital media often rated as overwhelming and challenging by seniors aged 70+ years
- Objectives:
 - Which determinants influence the intention of older people to use digital media (more frequently), compared to younger people?
 - How can a digital learning workshop be designed to promote the use of digital media among seniors aged 70+?

2. The Theory of Planned Behavior and Digital Media Usage



3. Method

qualitative interview study

N=21 semi-standardized interviews (following Francis et al. 2004)
12 female, 9 male; age: 70+ years; 16 used digital media and the internet, 5 did not
topics of the interviews: attitude, subjective norm, behavioral control regarding digital media usage, digital media usage

Item development

Qualitative data analysis (following Francis et al., 2004) for developing items for formative measurement of attitude, subjective norm, and behavioral control according to Ajzen (1991)

Antecedents	Example items
Attitude	"Digital media aid in saving time and reducing distances." "Digital media assist in staying connected with people who live far away."
Subjective norm	"My friends and acquaintances think I should use digital media." "My children/grandchildren think I should use digital media."
Perceived behavioral control	"The availability of personal support from family, friends, or other individuals for technical questions or issues is..." "My ability to comprehend usage instructions and manuals effectively is..."

Quantitative study for testing hypotheses

Cross-sectional study, N=215, consisting of 108 participants aged between 35 and 50 years, and 107 participants aged 70+; written and online survey; ad-hoc sample;
Participants aged 70+: 88 online users, 19 non-users;
Participants between 35 and 50 years: all online users

6. Discussion

- For younger individuals: only attitude is relevant for digital media usage; for those aged 70+: antecedents are more complex (ranked by effect size):
 - perceived behavioral control with a direct effect
 - perceived behavioral control with an indirect effect via subjective norm
 - Attitude with a direct effect
- These findings provide insights for the focus of designing the digital learning workshop for older adults
- Limitations and implications: e.g., sample size, sampling procedure (ad hoc sample), measures, behavior and not intention as dependent variable

Research Project "DigiKomS"

- DigiKomS means: "Ensuring the inclusion of older adults through programs for the preservation and promotion of digital competencies"
- Objective: enhancing digital media literacy, attitudes toward digital media and promote digital media use among seniors aged 70+ through a digital learning workshop



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4. Measures and Data Analysis Methods

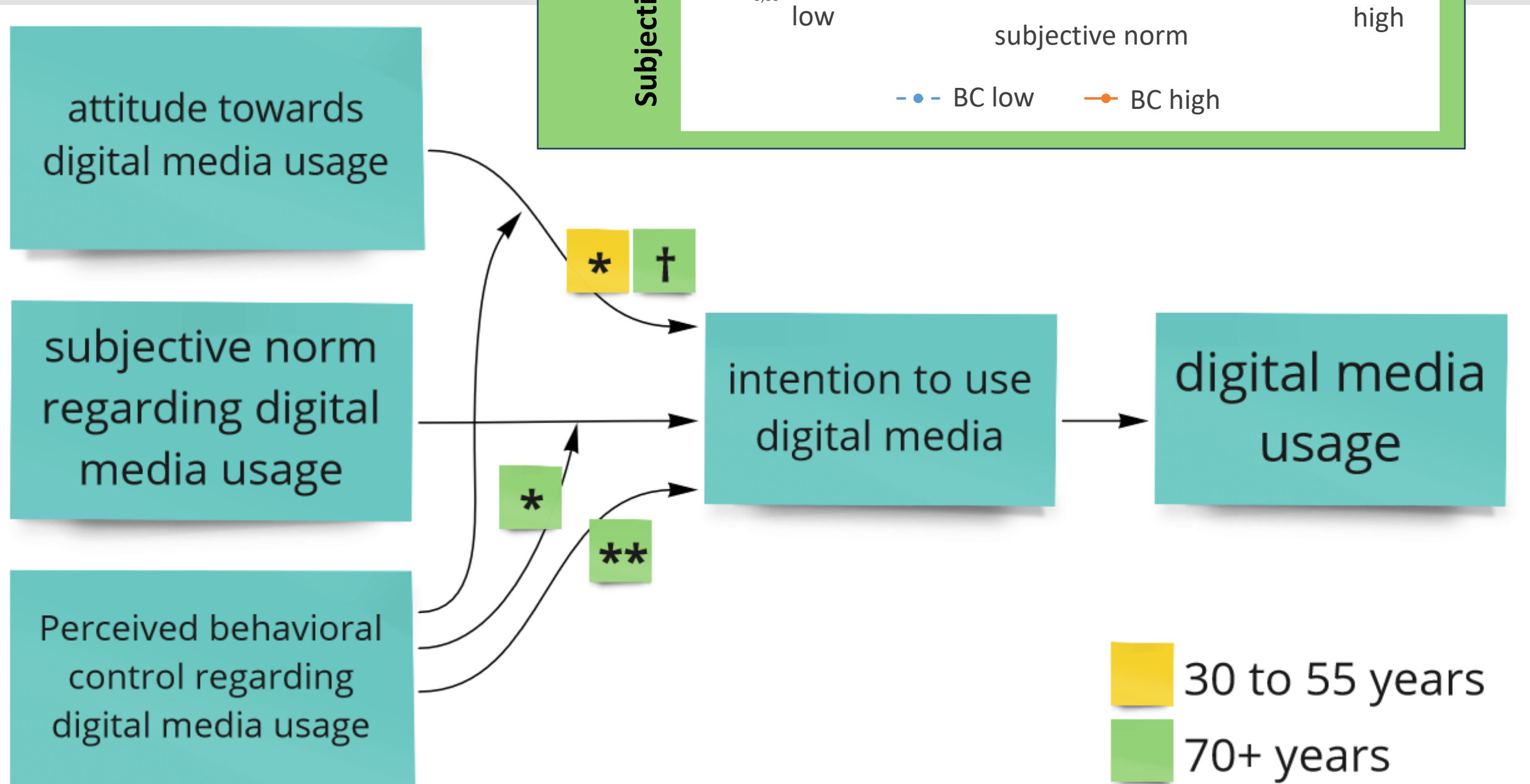
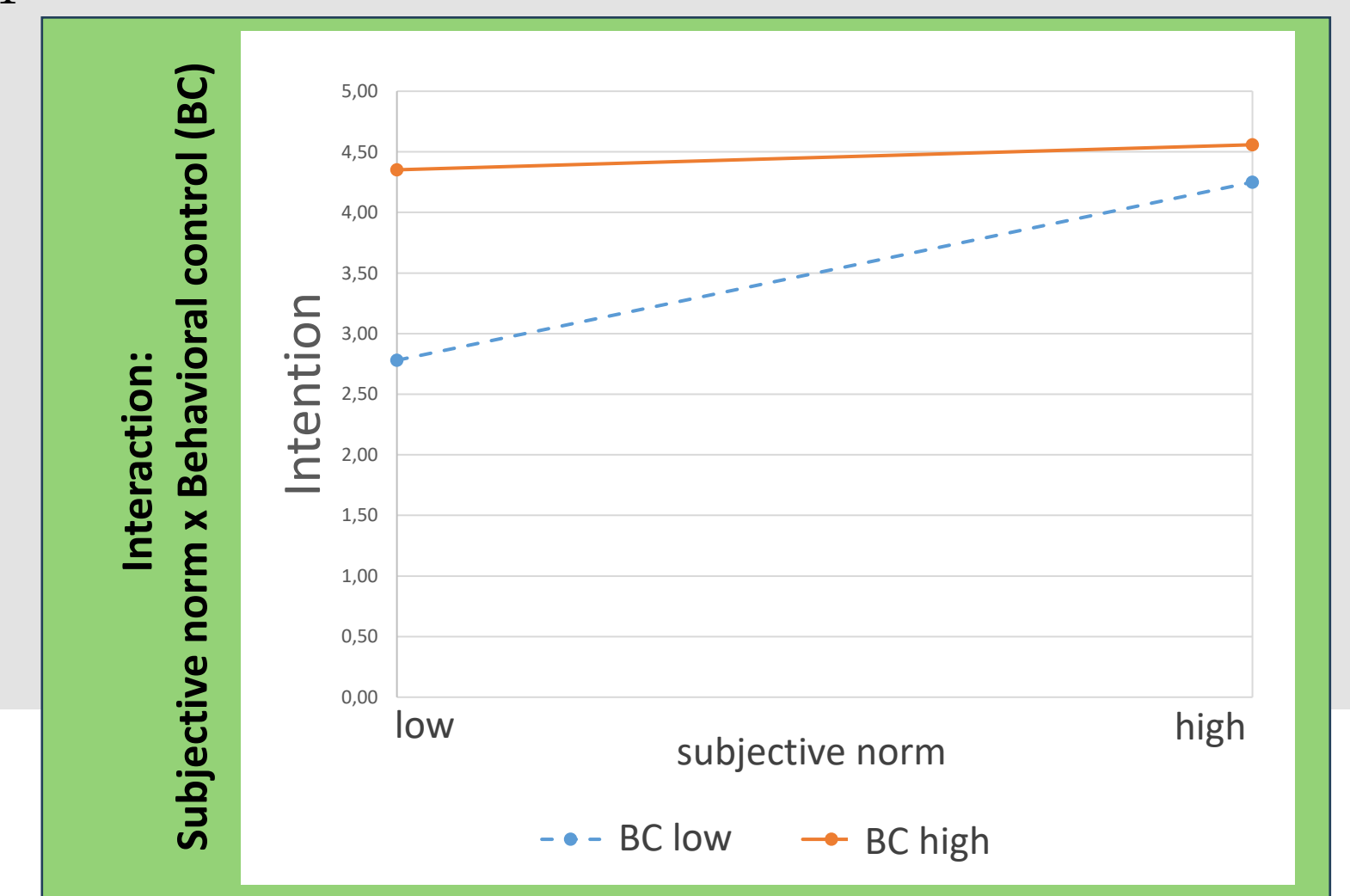
Variables	Number of items	Mean, SD, [Range of variable values]
Intention	1	Mean=4.44, SD=1.11, [1..5]
Attitude	18	Mean=1.67, SD=2.81, [-10..10]
Subjective norm	8	Mean=2.72, SD=3.28, [-10..10]
Behavioral control	12	Mean=4.00, SD=2.45, [-10..10]

- Moderated multiple linear regression analyses with prior z-standardization of variables; interaction terms for moderation

5. Results

Predictor	intention to use digital media as the criterion			
	30 to 55 years		70+ years	
	b	β	b	β
(Intercept)	4.94		4.19	
Attitude	.10	.30*	.26	.21†
Subjective norm	-.06	-.19	.13	.10
Behavioral control (BC)	.01	.03	.45	.33**
Attitude x BC	-.05	-.18	-.03	-.03
Subjective norm x BC	.04	.12	-.29	-.25*
R ²	.09 (.04)		.43	
(corr. R ²)			(.39)	
F	1.72		13.72**	

Note. † p < .10, * p < .05, ** p < .01



7. Digital learning workshop in the project DigiKomS

- Promoting digital media competencies (to enhance perceived behavioral control)
- Involving third parties (e.g., grandchildren, children, acquaintances, peers, co-learners) to create high subjective norm
- Promoting attitude changed towards digital media usage



Literature

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
Francis, J. et al. (2004). Constructing questionnaires based on the theory of planned behaviour: A manual for health services researchers. Newcastle upon Tyne: Centre for Health, Services Research, University of Newcastle.
La Barbera, F., & Ajzen, I. (2020). Control interactions in the theory of planned behavior: Rethinking the role of subjective norm. *Europe's Journal of Psychology*, 16(3), 401-417.

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