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Illustrating Consumer Purchasing Behaviors from the Nutrition Knowledge Perspective when Selecting Food for Weight Management in Real-life Supermarket Setting

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The purpose of the presentation is to …

illustrate a real-life setting in …

- collecting data (VAP-WAVO method) and
- consumers purchasing behavior

… from the nutrition knowledge perspective when selecting food for weight management.

Presentation is based on:

PhD thesis: Saarela A-M. Grocery Store as an Environment for Consumer Food Choices from the Weight Management Perspective, University of Eastern Finland, Faculty of Health Sciences, *Publications of the University of Eastern Finland. Dissertations in Health Sciences 187*. 108 p. 2013.

Paper I: Saarela A-M, Kantanen T, Lapveteläinen A, Mykkänen H, Karppinen H, Rissanen R. Combining Verbal Analysis Protocol and Wireless Audio-Visual Observation to Examine Consumers' Supermarket Shopping Behavior. *International Journal of Consumer Studies. doi: 10.1111/ijcs.12022, 2013.*

Paper II: Saarela A-M. Change of Behavior when Selecting Food Products in a Supermarket Environment after Reminding Consumers about Weight Management. *Public Health Nutrition*. doi:10.1017/S136898001300044X*, 2013.*

Paper III: Saarela A-M, Lapveteläinen A, Mykkänen H, Kantanen T, Rissanen R. Real-Life Setting in Data Collection: the Role of Nutrition Knowledge whilst Selecting Food Products for Weight Management Purposes in a Supermarket Environment. *Appetite. doi: 10.1016/j.appet.2013.08.014, 2013.*

Paper IV: Saarela A-M, Keinänen A-R, Rissanen R. Energy profiles and Nutrition Information in Food Product Categories Selected in Finnish grocery stores, Considered from a Weight Management Perspective. *Journal of Research for Consumers. 21: 1-17, 2012.*

Orientation


Photo: Dr. Anna-Maria Saarela

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Background



Future Food RDI Hub Finland approach created under the EU-funded FP7-KBBE-Tradeit-project involves consumers throughout the whole product development

from creating ideas

to the authentic real-life setting data collection

for example by using VAP-WAVO-method *

* *Verbal-Analysis-Protocol combined to Wireless-Audio-Visual-Observation*

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www.tradeitnetwork.eu

Useful Portal for Food Industry - Marketplace
marketplace.tradeitnetwork.eu

Taste of Science – Journal for SME
www.tasteofscience.com



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Future Food RDI Hub, Finland

http://futurefood.savonia.fi/index.php/fi/

SERVICES:

Consumer Reseach

Food Product Development

Food Analysis

Future Food in YouTube:

https://www.youtube.com/watch?v=MK8-g2FPkqY

Shopping Environment Orientation

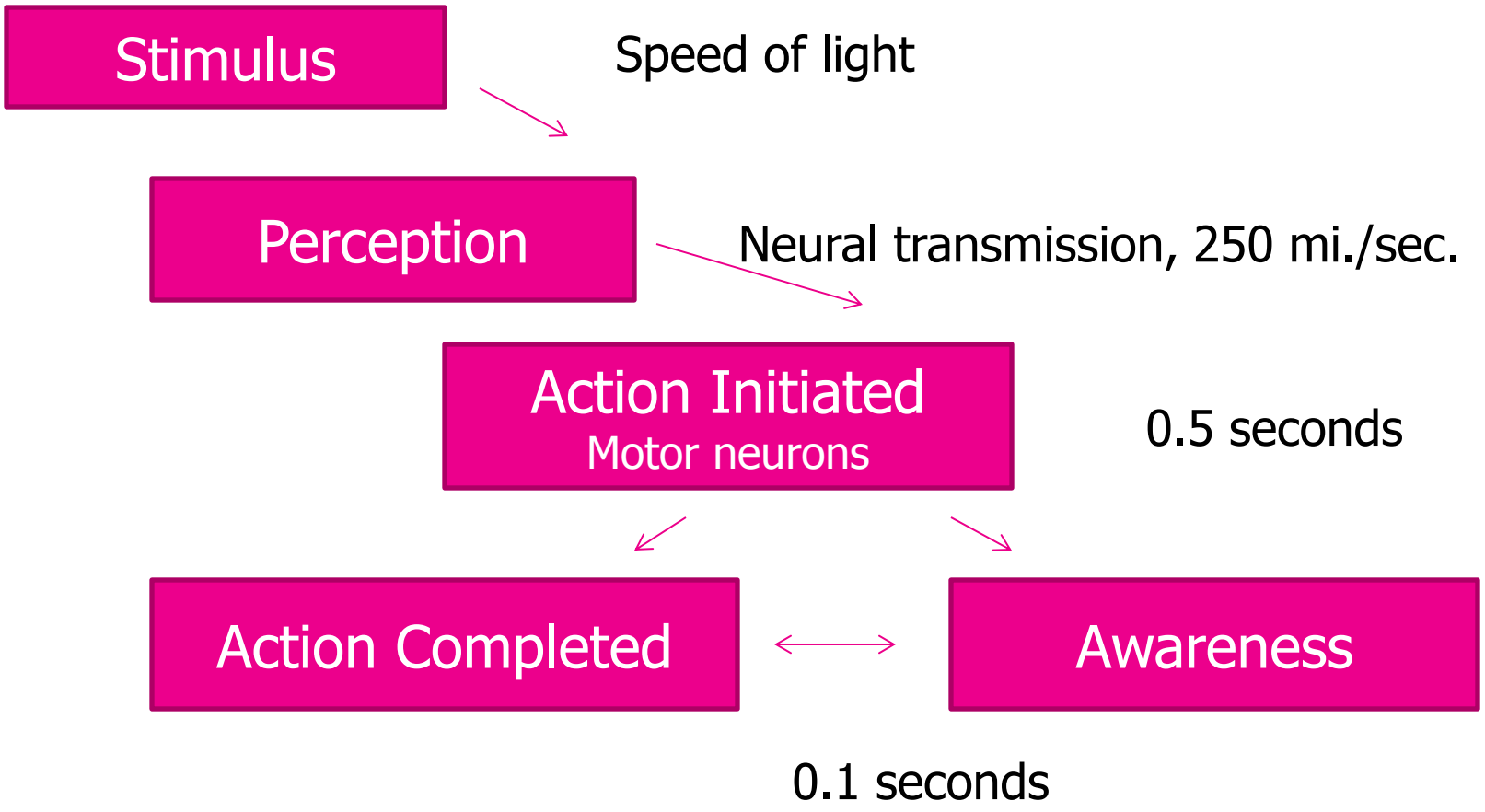
For majority, health and nutritional issues are important food selection criteria.

Retailers can design versatile, desirable and attractive product assortments and services for consumers.

Groceries worldwide present the enormous variety of products and the variation of packaging and labelling.

Enormous and versatile product assortments at groceries possess several challenges to consumer's daily life.

Behavior is led by the environment & initiated before conscious awareness



Source: Libet B et al., 1991

Methods and study subjects



Photo: Dr. Anna-Maria Saarela

Methods and study subjects

- The recruitment of the subjects: 1000 questionnaires delivered in Nov-Dec at the K-Citymarket Kolmisoppi, Kuopio
- 167 respondents who gave back the questionnaires
- The subjects represented consumers (n=36), aged from 18 to 65, corresponding to the profile of the survey responses
- Methods: verbal analysis protocol combined with wireless audio-visual observation, questionnaires and interviews in the K-Citymarket in Apr-May 2010
- The subjects were given a shopping list of 11 food categories twice;
  - a product they usually buy and
  - a product they would use for weight management

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Orientation for VAP-WAVO

Verbal Analysis Protocol – VAP - has previously been used to study consumer behavior and individual decision making (Payne and Easton Ragsdale, 1978; Ericsson and Simon, 1993; Ericsson, 2006).

Based on verbalizations concurrent with task performance, the approach can be combined with other consumer research techniques, such as **Observation** (Aitken *et al.*, 2010).

Novelty → we combined both methods **VAP + WAVO** (**Wireless Audio-Visual Observation**) by using wireless technology



Figure 1. New approach developed in data collection. The actual setting at the supermarket; the researcher was coordinating the verbal protocol analysis. The technician was controlling the wireless documentation of the shopping environs, the subject and the researcher. There was also the assistant who was observing the subject's process. Photo: Hannu Karppinen

Saarela et al. 2013

RESULTS


Photo: Dr. Anna-Maria Saarela

Results

The **energy and nutrient content** of food products **varies enormously** – see the next slide

Consumers have **a challenging task to be able to easily find, identify and compare suitable products** from a weight management point of view.

There was **a wide variation of nutrition knowledge among consumers**.

Also the level of nutrition knowledge was related to total **energy reduction in products selected** and in order of **product's selection time**.

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Paper IV: Energy contents of selected food products according to the observational study made in the 17 grocery stores

Product	Energy minimum kcal/100g	Energy maximum kcal/100g	Difference of max. and min. energy values kcal / 100g
Fat spread, n = 94	220	720	500
Yoghurt, n = 363	26	160	134
Cold cuts, n = 263	83	450	367
Ready meal, n =459	30	330	300
Prepared salad, n = 74	23	320	297
Cheese, n = 136	180	496	316
Bread, n = 275	140	339	199
Cookies, n = 397	262	570	308
Salad dressing, n = 76	35	594	559
Soft drink, n = 109	0	48	48
Juice, n = 238	1.5	59	57.5
Total, n = 2484			

Saarela et al. 2012.

Results

Weight management oriented consumers was **not a homogenous group**.

There were **different sub-groups** who appreciated and followed different food selection practices in a supermarket setting.

Orientations for food selection from weight management perspective varied whilst **taste-, price- and knowledge-oriented perspectives** dominated in food selection.

Summary

In a grocery store, the majority of consumers make their shopping decisions **routinely** whilst **taste predominates** as a food selection criterion.

While selecting food the implementation of the **nutrition knowledge varied inter-individually and -product-specifically**.

Generally, weight management is **more related to motivation of a consumer** than to select a product for weight management purposes.

The needs of consumers who are actively managing their weight should be better taken into consideration while designing **new package labels** and **placement of products**.

The retail market believes that **accurate and intelligent self-supporting activities** on an individual health and wellness level are seen as the way forward, enhancing quality of life and reducing the cost of health care.

Conclusions

→ It is essential to understand and **give support for different consumer segments** for providing them more successful weight management outcomes in a long run.

→ **Innovative technological solutions** should be found and piloted with consumers by manufacturers working cooperatively with retailers in the areas relating to marketing psychology and communication of nutritional information.

→ **Successful consumer marketing** will achieve desirable results for manufacturers, retailers and consumers as well as benefit **the welfare of Society** in the long run.

Practical suggestions how to improve healthier food choices at grocery stores



Photo: Dr. Anna-Maria Saarela

Practical suggestions how to improve healthier food choices at grocery stores

CONSUMERS AND FOOD CHOICES AT GROCERY STORES

How to identify the needs of consumers?



GROCERY STORE ENVIRONMENT

How retailers are able to support consumers' food choices from the weight management perspective among enormous selection of products available?

PRODUCTS AND LABELS

How consumers are able to find more easily food products from the weight management perspective?

Practical suggestions how to improve healthier food choices at grocery stores

CONSUMERS AND FOOD CHOICES

Challenges / How to identify the needs of consumers?

Consumers with different kind of orientations, knowledge and skills in relation to healthy food choices need support and guidance whilst often routinely and quickly selecting food among enormous selection of products available

Practical suggestions how to improve healthier food choices at grocery stores

GROCERY STORE ENVIRONMENT

How retailers are able to support healthier food choices among enormous selection of products available?

- developing health-oriented service concept throughout the whole service chain
- innovative technological solutions in nutrition communication
- personalized and guided shop tours with a nutritionist
- continual health campaigns / weeks with discount coupons
- increasing health-oriented advertisements; shelf labels, recipes available, tasters
- development of selections and product categories in relation to health issues, positioning

Practical suggestions how to improve healthier food choices at grocery stores

PRODUCTS AND LABELS

How consumers are able to find more easily healthier food products?

- developing new products or improving existing products for targeted consumer groups such as highlighting more specifically health oriented products
- take advantage of industrial insider information in relation to coloring codes which have been used to categorize and to find out more easily different kind of products produced
- harmonize and standardize package information used in food products and highlight relevant issues more
- cooperation within food industry and retail sector in relation to healthier food choices, such as pricing strategies

Future prospects



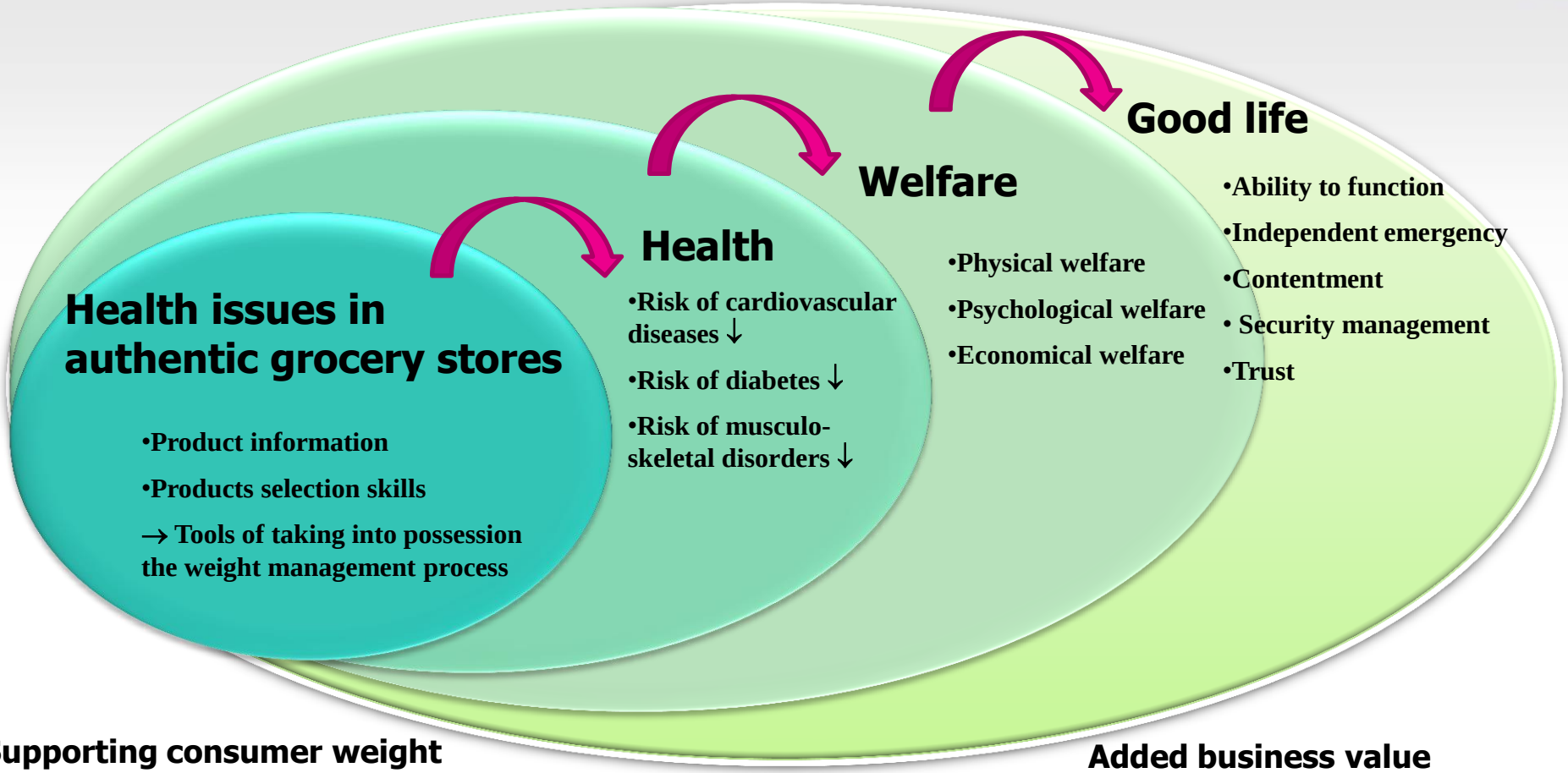
Dr. Anna-Maria Saarela

Summary of suggestions

- **The layout of low energy content products** at supermarkets; e.g. shelf positioning of products, pricing, special offers, shelf markings, shelf speakers, product demonstrations
- How to **improve new ways to communicate to consumers** in relation to package labels
- **Innovative consumer services** at supermarkets, e.g. personalized self-relevant and behavior-driven nutrition information
- **Piloting innovative technological solutions** in the areas relating to marketing psychology and communication of nutritional information
- Should dieticians able to increase consumers' awareness to select healthy food? Will we find a "**personal nutritionist**" at supermarkets when required in the foreseeable future?
- **The complete weight management strategy** in cooperation with different parties

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The complete weight management strategy for supporting the welfare of individuals, public health and food business



Supporting consumer weight management:
•Product communication; packages, advertising, marketing
•Innovative consumer services

Willing to share the burden on consumer health status
•Promoting public health
•Promoting national economy

Added business value
•Slumbering consumer segment
•Consumer positive imago
•renewing competitiveness
•”win-win-win” –principal (consumer-society-company)

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SEVENTH FRAMEWORK PROGRAMME





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- **Video links:**
  - **Savonia UAS:** https://www.youtube.com/watch?v=NiunpBmDKTs
  - **Savonia UAS as a part of the Kuopio Science Park:** https://www.youtube.com/watch?v=_61mVrTObY8






Thank you!
Kiitos!



Photo: Dr. Anna-Maria Saarela