

ICT-based tools for excessive drinkers – easy, accessible and attractive alternatives

Anja Koski-Jännes

Department of Sociology and Social Psychology

University of Tampere

Finland

E-mail: anja.koski-jannes@uta.fi

Information and communication technology (ICT)

- Fast expansion during the past 15 years all over the world.
- 73 % of Finnish people between 15 and 79 years had access to the Internet from their home in 2005.
- 92-99 % of people under the age of 35 are current users of Internet.
- 98 % of Finns between 15-79 years had a mobile phone in 2005.



Mobile phones and Internet as viable new channels for providing self help tools and information for people with alcohol and drug abuse problems.

Advantages of ICT

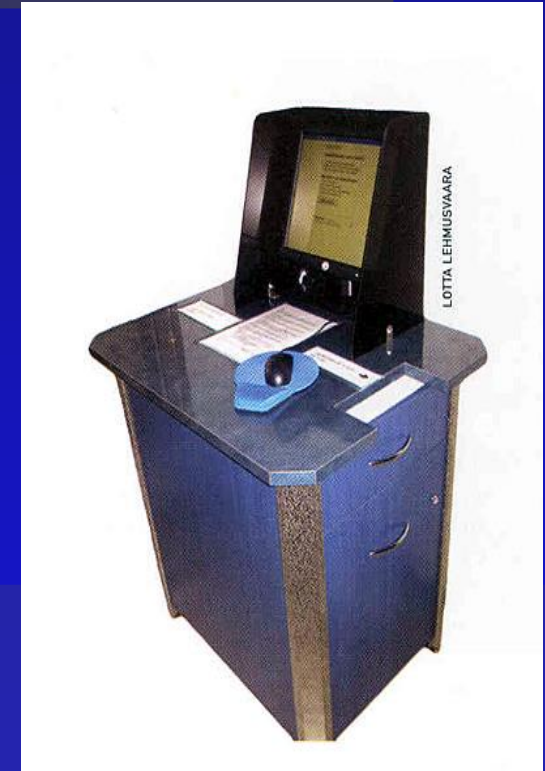
- anonymity
- accessibility in time and space
- interactivity and feedback
- low cost for users
- low threshold for seeking help
- empowerment, self help
- serves hard to reach peer and marginal groups
- easy modifiability

Promille SMS

- cell phone text message service to measure BAC - available also through the Internet
- user sends text message information about gender, weight, starting time of drinking, and the # of drinks consumed
- user receives feedback on his/her current BAC and a note when legally allowed to drive a car
- developed by Teuvo Peltoniemi from the A Clinic Foundation in 2000 (leading treatment service provider in Finland)

Rivers to brooks -campaign

- Aims:
 - to improve risk awareness among ordinary people
 - to motivate self-initiated reduction of heavy drinking
 - to familiarize treatment providers with interactive services
- A portable stand alone computer with alcohol information and AUDIT test providing personalized feedback on one's drinking.
 - developed by the A-Clinic Foundation (Lotta Lehmusvaara, Lolan Lindroos & Arja-Maarit Rokka)
- Testing places: a public library, a hospital waiting room, a health care centre, the lunch room and the intranet of a paper factory.



Feedback on Audit

Testit

Palaute



- 0 - 7 pistettä:** riskit vähäisiä
- 8 - 10 pistettä:** riskit lievästi kasvaneet
- 11 - 14 pistettä:** riskit selvästi kasvaneet
- 15 - 19 pistettä:** riskit suuria
- 20 - 40 pistettä:** riskit erittäin suuria

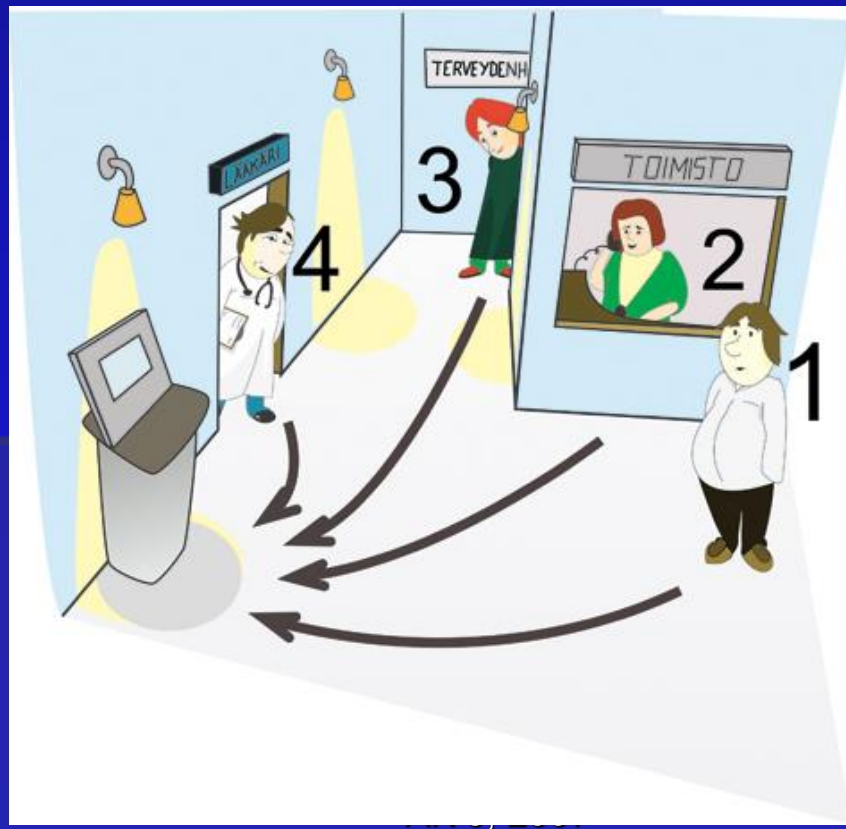
Kokonaispistemääräsi on **9**.

Alkoholin käyttöösi liittyy lieviä riskejä. Sinun kannattaa tarkkailla alkoholinkäyttöäsi.

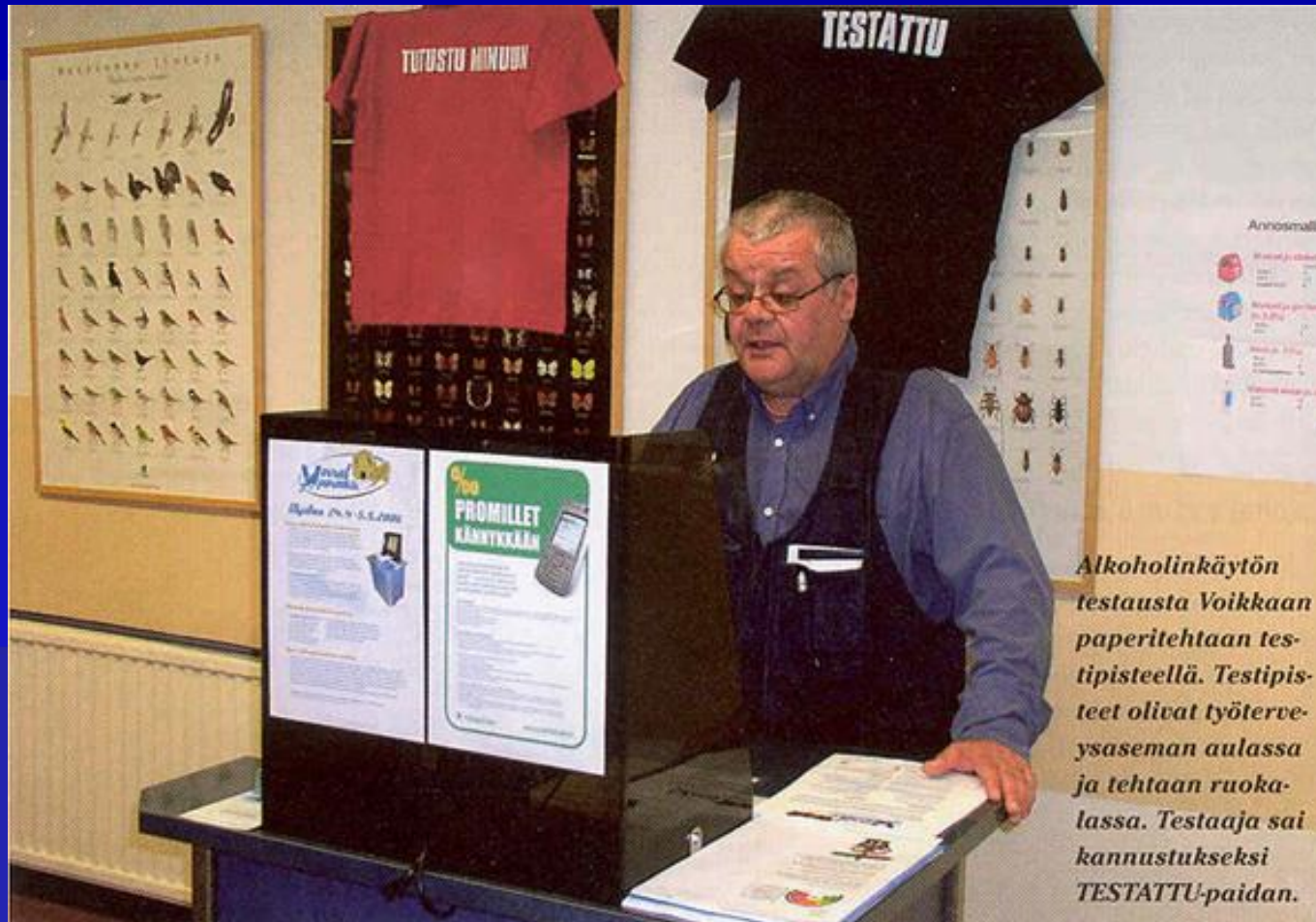
Lue vielä **kysymyskohtaiset palautteet** antamiisi vastauksiin. Saat niistä hyviä lisävinkkejä!



Testing place in a hospital waiting room



Testing place in a paper factory



Alkoholinkäytön testausta Voikkaan paperitehtaan testipisteellä. Testipisteet olivat työterveysaseman aulassa ja tehtaan ruokalassa. Testaaja sai kannustukseksi TESTATTU-paidan.

Addictionlink

- www.paihdelinkki.fi - founded in 1996
- Currently 40 000 individual visitors per month in Finland (population 5,3 million)
- It consists of:
 - **databank**
 - **self-assesement tests**
 - **self-help tools and programs**
 - **services for families and children**
 - **open & closed discussion forums for substance abusers and reducers**
 - **counseling & consultation services**
 - **information for professionals**
 - **services in Finnish, Swedish, English, Russian and Sign language**

Drinking Habits Test

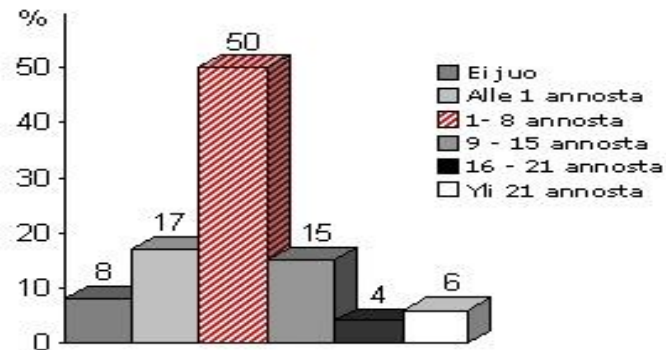
- www.paihdelinkki.fi/testaa/juomatapatesti
- Slightly modified version of the Canadian service (Cunningham, Humphries & Koski-Jännes 2000)
- Consists of
 - 10 AUDIT questions
 - 6 psychosocial consequence questions
 - # of drinks consumed on each day of a typical week, or if irregular drinking pattern drinking diary over the past month
 - # of drinks in the last drinking occasion
 - Demographic data (age, sex, weight)
- Time needed for responding \approx 5 minutes.

Personalized feedback

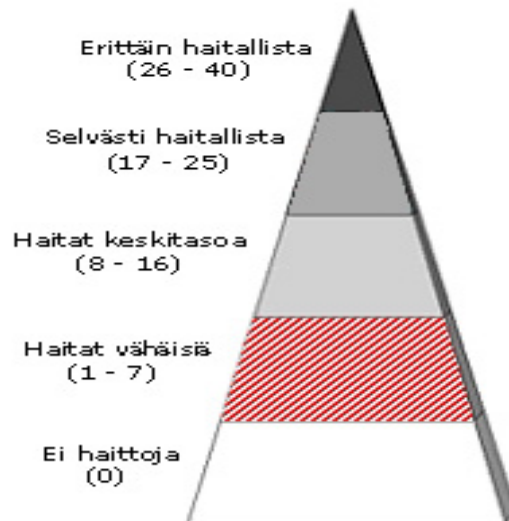
- Comparison of the participant's drinking with Finnish national norms for males and females
- # drinking days in a year
- # drinks in a year
- # hours under the influence in a year
- # hours to eliminate daily intake
- Money spent on alcohol in a year
- Caloric intake in a typical drinking day
- Relationship of consumed drinks to BAC
- Probability of accidents at different levels of BAC
- Summary score of the AUDIT test and level of risk
- The upper limits of sensible drinking

MILTÄ JUOMISESI NÄYTTÄÄ MUIDEN MIESTEN JUOMISEEN SUHTEUTETTUNA?

Kerroit juoneesi viimeksi 1.0 annosta alkoholia ja juovasi keskimäärin 7.0 annosta alkoholia viikossa. Raidallinen osuus kuvaa sitä osaa väestöstä, johon sinä juomatapojesi perusteella kuulut.



Sinä sait testistä 6 pistettä. Raidallinen pylväs kuvaa ryhmää, johon sinä kuulut pisteiden perusteella



Theoretical underpinnings

- Self-regulation of behaviour is based on feedback on one's behavior (Carver & Scheier: Self-regulation theory)
- Excessive drinking is largely caused by one-sided feedback, i.e. the lack of balancing input to the use of alcohol (West 2006).
- To change this inclination balancing feedback is needed.
- A good way to provide it without threatening the “face” of a person (Goffman) is to do it anonymously through the Internet.
- Personalizing the message makes its motivational content more effective.

Subjects of a follow-up study

- Recruited in March - October in 2004.
- 22 536 self-assessments completed
- 7% responded to a survey on this service
- Survey respondents (n=1 598) were asked if they wanted to participate in the follow-up study
- 22% agreed by providing their e-mail address
 - 3 persons who responded for somebody else and 5 persons with incomplete data were excluded.
- **Study sample (n = 343)**
- Comparison sample: A random sample (n = **581**) of the service users
- 3-month data already reported by Koski-Jännes, Cunningham, Tolonen & Bothas (2007)

Background data on the study subjects compared to a random sample of service users during the same period (Koski-Jännes, Cunningham, Tolonen & Bothas 2007)

Variable	Study sample (n = 343)	Service users (n = 581)	p
% women	60.6	49.2	.001
Mean (SD) age	32.6 (11.9)	30.4 (12.5)	.007
Mean (SD) AUDIT	17.0 (8.7)	14.1 (8.1)	.000
Mean (SD) drinks in the last occasion:	8.5 (6.2)	7.8 (5.7)	ns.
Mean (SD) drinks in a typical week:	19.0 (18.5)	12.2 (14.4)	.000
Mean (SD) consequences of drinking:	2.7 (2.1)	1.9 (1.9)	.000

Responding to the follow-up

- Response rates:
 - 78 % at 3 months
 - 69 % at 6 months
 - 61 % at twelve months.
- Non-responders at six months had more drinking problems already at the baseline ($p = .03$).
- Non-responders slightly heavier drinkers than responders, but the differences remained non-significant.

Data analysis

- Dropout attrition may cause a selection bias
- Intention-to-treat (ITT) results were therefore used in the analysis of the main outcome variables
- Missing follow-up data on non-responding subjects were replaced by their corresponding baseline data

ITT-results on drinking at the baseline and at the 3-, 6- and 12-month follow-up (n = 343)

Variable	Baseline	3-month follow-up	6-month follow-up	12-month follow-up	p
Mean (SD) AUDIT	17.0 (8.7)	14.7 (8.4)	14.9 (8.8)	15.0 (9.0)	***

Mean (SD) AUDIT-C	7.6 (2.5)	7.0 (2.6)	7.0 (2.6)	6.9 (2.7)	***

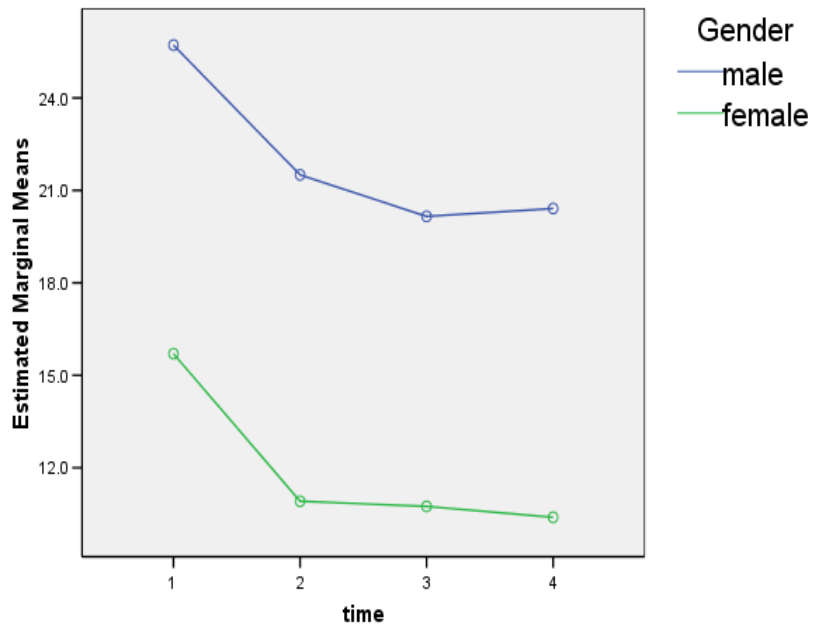
Mean (SD) # drinks in a typical week	19.0 (18.5)	14.9 (15.6)	14.9 (16.7)	15.9 (17.8)	***

Mean (SD) # drinks in the last occasion	8.5 (6.2)	7.5 (6.5)	7.5 (6.3)	7.3 (5.7)	***

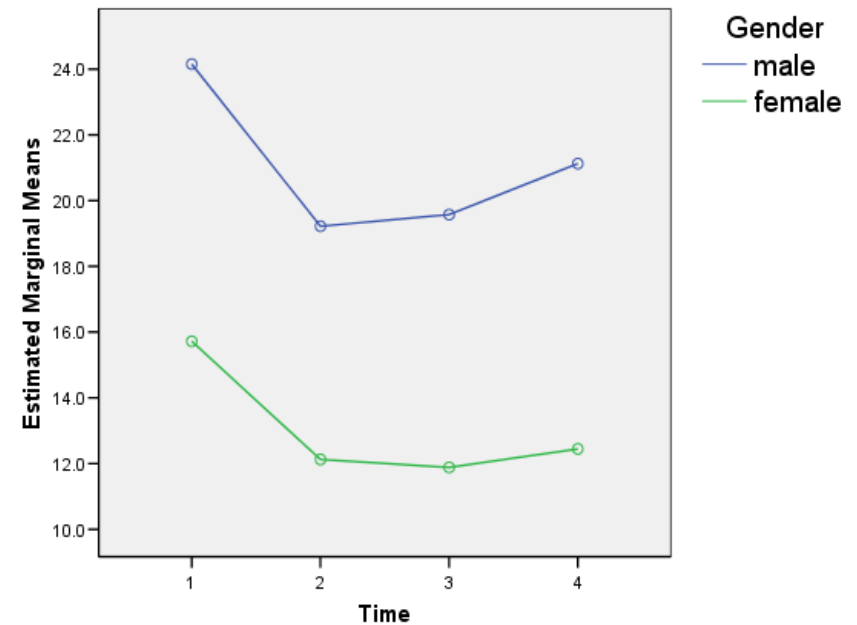
Mean (SD) # negative consequences	2.7 (2.1)	2.3 (2.1)	2.2 (2.2)	2.4 (2.1)	***

Drinking at the baseline and at 3-, 6-, & 12- month follow-up

Per protocol drinks in a week by gender

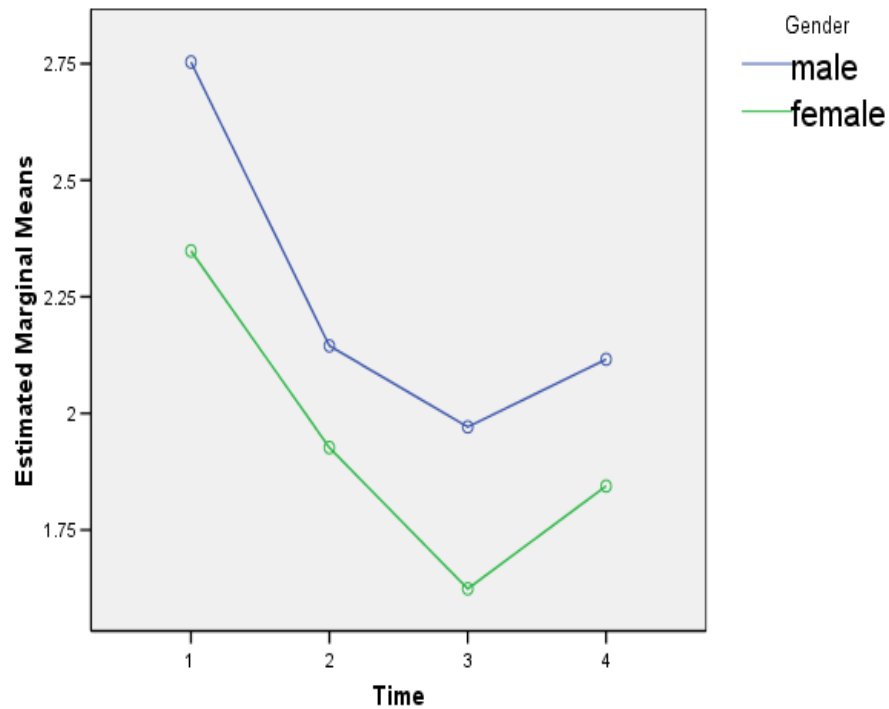


ITT Drinks in a week by gender

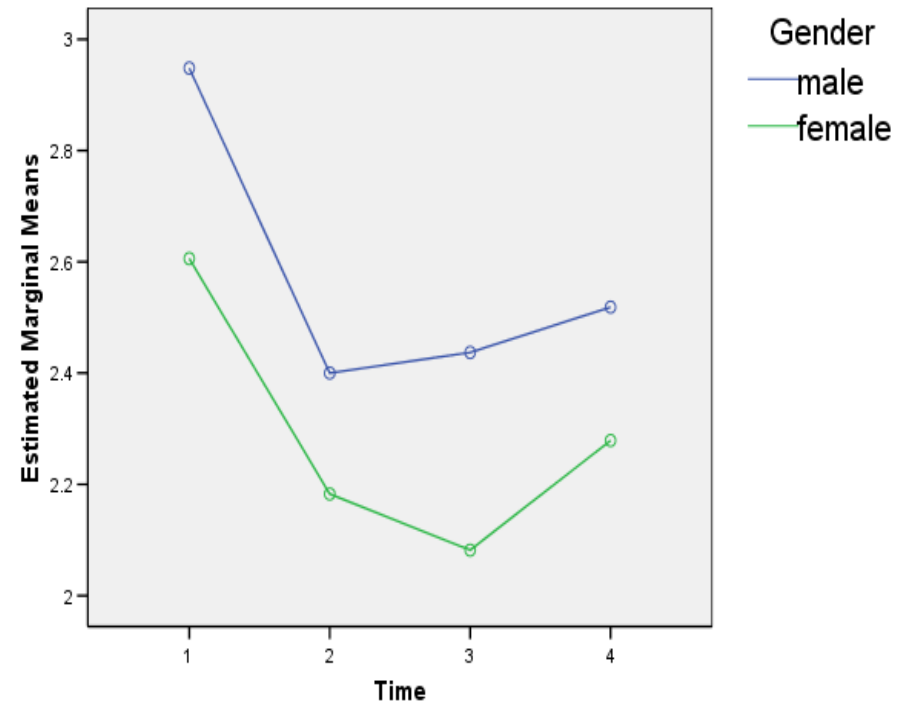


Consequences of drinking at the baseline and at 3-, 6- and 12-month follow-up

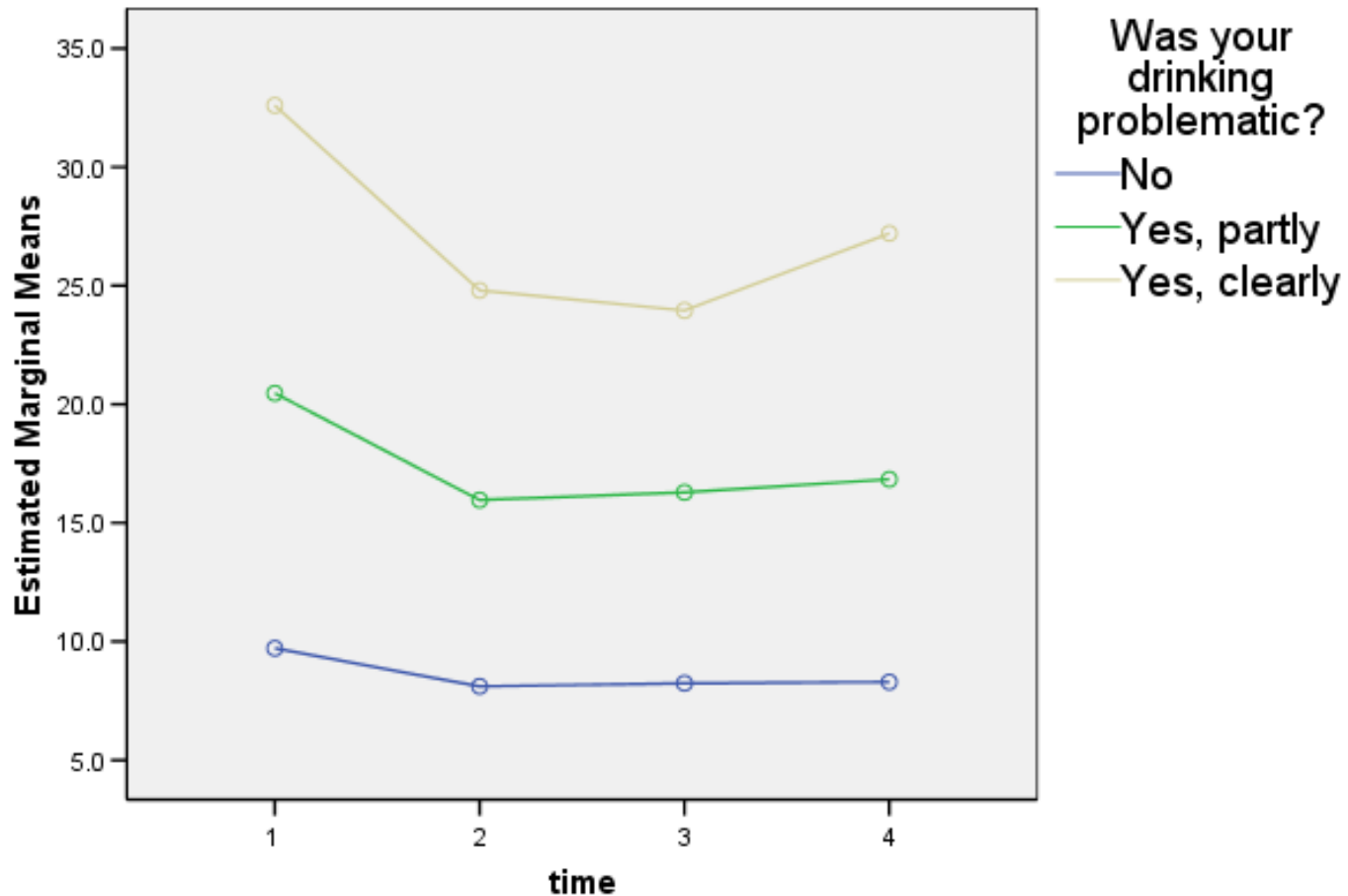
Per protocol drinking consequences by gender



ITT drinking consequences by gender

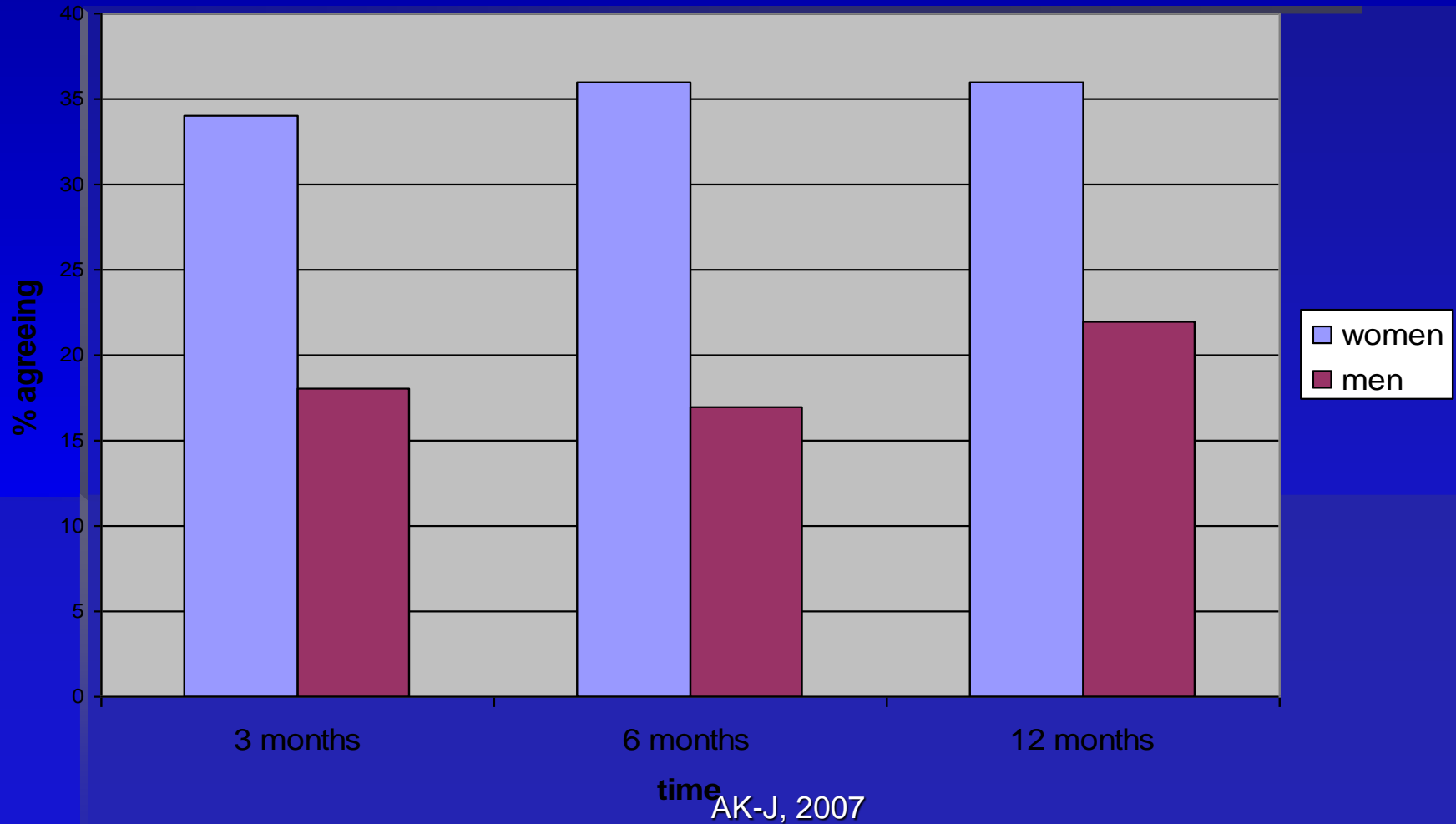


ITT drinks per week by experienced drinking problem



Have you recommened the test to anybody else?

Have you recommended the test to others?



Discussion

- Is the observed reduction a true effect of the personalized feedback?
- Possibly because
 - AUDIT scores ↓ in the study sample, while drinking generally increased by 10 % in one year after the price reductions on alcohol in April 2004.
 - The changes in drinking rather similar in Cunningham et al. (2005) with a smaller sample (ns.)
- Other possible explanations:
 - Attempts to please the researchers by veiling the true consumption? No probable
 - **regression to the mean – the need to test with RCT**

Summary

- The results imply possible reduction of drinking among service users, while drinking generally increased by about 10% in Finland due to the heavy price reductions on alcohol in 2004.
- Internet provides a promising avenue for primary and secondary prevention of excessive drinking.
- More appealing for women, but no significant gender differences in the reduction of drinking.
- Should be further developed and studied

Future visions

- Possible further uses:
 - a simple follow-up tool for alcohol-related treatment services
 - supporting service to health care consultations and community prevention campaigns
- Further development requires:
 - providing feedback on successive assessments in the form of charts
 - ways of rewarding the user of any progress in changing their problem behaviors.