

The viability of technology-based smoking cessation programs in developing countries: Findings from a survey in Ankara, Turkey



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* Thank you for your interest in this presentation. Please note that analyses included herein are preliminary. More recent, finalized analyses may be available by contacting ISK for further information.

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Background

The Internet and TXT messaging are recognized as valuable tools for intervention and prevention in developed countries, (1-5) yet little is known about the feasibility or acceptability of technology-based research in low- and middle-income countries. Technology-based interventions are scalable and cost effective as there are fewer personnel and infrastructure costs.(6) Second, technology-based interventions lack many of the access issues of traditional interventions. People who live in areas without nearby smoking cessation programs are able to easily access programs on the Internet or via cell phone. Third, technology allows the tailoring of the program to the individual's characteristics.(7-9) Data suggest explosive Internet and cell phone growth in Turkey. An estimated 53 million cell phones were owned by Turks (compared to 19 million landlines) and 12 million people were online in 2006.(10) Despite the potential advantages of technology as a delivery method for smoking cessation programs, its feasibility in Turkey where public health resources are limited and smoking prevalence is high is unknown.

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Survey Methodology

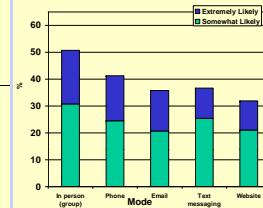
Data were collected between April 12 and July 23, 2008. The survey protocol was reviewed and approved by the Western IRB in the United States and Hacettepe University in Ankara, Turkey. Respondents were recruited in Ankara, Turkey. Flyers were posted in the common areas at Hacettepe University and a research assistant went to government buildings and solicited those smoking outside to take part. Among the 165 adults who were identified as eligible, 152 adults completed the self-report survey (response rate = 91%). Four respondents subsequently were deemed ineligible during data cleaning and were dropped, resulting in a sample size of 148.

Sample characteristics (n=148)

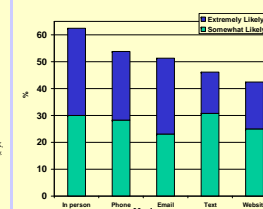
Demographic characteristics	% (n)
Age (Mean: SD)	37.8 (10.0)
Female	44% (65)
Married	64% (94)
Household income	
1249 ytl or less	26% (39)
1250 – 1999	28% (41)
2000 – 4000 ytl	27% (40)
More than 4000 ytl	17% (25)
Number of cigarettes/day	
1-5 cigarettes	9% (14)
6-15 cigarettes	43% (63)
16-25 cigarettes	38% (56)
26 cigarettes or more	10% (14)
Quit attempt for at least 24 hours	53% (79)

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ALL SMOKERS: Likelihood of using smoking cessation services by mode



SMOKERS SERIOUSLY THINKING ABOUT QUITTING IN THE NEXT 30 DAYS: Likelihood of using smoking cessation services by mode



Study Questions

1. What is the acceptability of technology-based smoking cessation programs? How does this compare to traditional services?
2. What is the feasibility of the Internet as a data collection tool?

Eligibility Criteria

- 18 years of age or older,
- Currently smoking daily,
- Owning a cell phone and having sent and received text messages in the past year
- Informed consent.

Study Limitations

- Sample skewed towards technology users. Although the impact of the data was minimized because respondents were told that "we are designing a program to help adults quit smoking and we need your input".
- Small sample size
- Convenience sample

Comparison of data by mode

Characteristics	Paper (52%, n=77)	Online (48%, n=71)	Statistical comparison
Age (Mean: SD)	36.9 (9.8)	38.8 (10.2)	t(145) = -1.1
Female	47% (36)	41% (29)	$\chi^2(1) = 0.5$
Smoke 1 st cigarette 30 mins of waking	44% (34)	43% (29)	$\chi^2(1) = 0.03$
Number of cigarettes per day			$\chi^2(4) = 15.0^{**}$
1-5 cigarettes	9% (7)	10% (7)	
6-15 cigarettes	44% (34)	41% (29)	
16-25 cigarettes	45% (35)	30% (21)	
26 cigarettes or more	1% (1)	18% (13)	
Seriously thinking about quitting			$\chi^2(3) = 15.4^{***}$
In the next 30 days	39% (30)	14% (10)	
In the next 6 months	12% (9)	16% (11)	
Sometime	39% (30)	41% (28)	
Never	9% (7)	28% (19)	

Conclusion

1. Many respondents express interest in utilizing technology-based treatments to aid in the cessation attempt.
2. The application of new technologies to increase the access of evidence-based smoking cessation programs among smokers in middle income countries should be considered.
3. Use of cost-effective data collection methodologies such as online surveys appear valid.