

## Internet use and health among children and adolescents in the United States

by  
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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.



## Today's talk outline

- General Internet usage data
- Internet as a healthcare resource
- Online experiences and relationships
- Review of Internet-based interventions
- Opportunities for future research
- Questions

## Background

The first step in building a successful targeted intervention online is to understand how young people *use* the Internet.


## General Internet usage data



### Youth Internet use characteristics

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- 97% of youth between the ages of 12 and 18 use the Internet (UCLA Center for Communication Policy, 2003)
- Home Internet access (US Department of Commerce, 2002)
  - Half of youth 10-13 years old
  - 61% of youth 14-17 years old



### Youth Internet use characteristics (cont)

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- The majority of youth use the Internet for an hour or less a day (Finkelhor, Mitchell & Wolak, 2000; Woodard, 2002):
  - 14% spend three hours or more per day online (Ybarra, Mitchell & Wolak, 2005).
- Boys and girls are equally likely to have used the Internet (Rideout, Foehr, Roberts & Brodie, 1999)



### Internet activities

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- 95% of youth use the Internet for email (Lenhart, Rainie, & Lewis, 2002).
- 85% of teens use the Internet for school work (US Department of Commerce, 2002)
- 76% of older teens (15-17 y.o.) have searched for health information (Kaiser Family Foundation, 2001)



### Internet as a healthcare resource

## Internet use for health care information

- Somatic health (Kaiser Family Foundation, 2001)
  - HIV/AIDS: 31%
  - Sexually transmitted diseases: 24%
  - Pregnancy or birth control: 21%
- Mental health
  - Drug and alcohol abuse: 25% (Kaiser Family Foundation, 2001)
  - Depression or mental illness: 18-23% (Kaiser Family Foundation, 2001; Rideout, 2001)
  - Violence: 23% (Rideout, 2001)
  - Suicide: 12% (Gould, Muntfakh, Lubell et al., 2002)

## Impact of online health information

- 53% have had a conversation with their caregiver about what they learned (Rideout, 2001)
- 41% have changed their behavior (Kaiser Family Foundation, 2001)
- 14% have sought healthcare services (Rideout, 2001)

## Online experiences and relationships

### Friendships online

- Communication tool with 'traditional' peers (Ybarra, Mitchell & Alexander, 2005)
  - 67% talk with peers seen often
  - 46% talk with peers seen infrequently
- Communication with online peers (Ybarra, Mitchell & Alexander, 2005; Finkelhor et al., 2000)
  - 56% have talked with a 'stranger' online
  - 16% have formed a close friendship with someone met online
    - 3% have a close online friendship with an adult

### Sharing information

- Self-disclosure (Finkelhor et al., 2000)
  - 7% of youth sent a picture of themselves to someone else online
  - 11% of youth posted personal information (e.g., home address) online

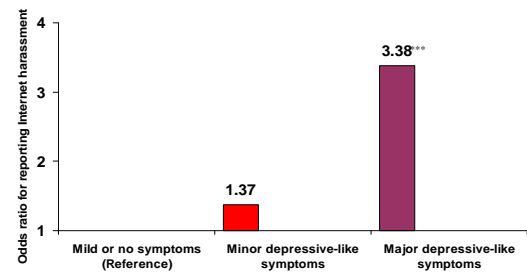
### Cross-section of Internet and mental health

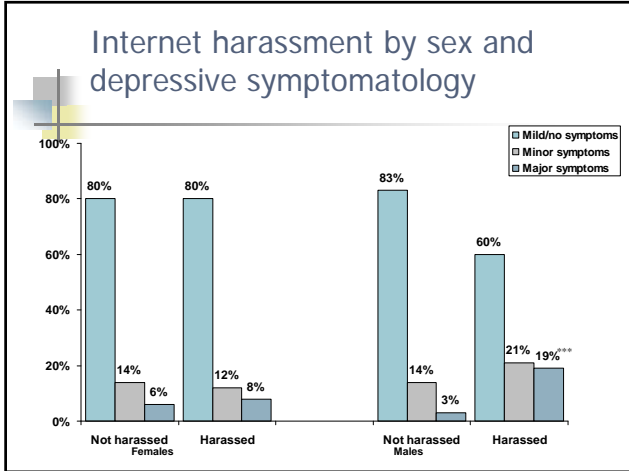
### Internet usage and depression

- Most studies have reported that both cross-sectionally (Ybarra, Mitchell & Wolak, 2005; Sanders, Field, Diego et al., 2000; Gross, Juvonen, Gable, 2002) and longitudinally (Kraut, Kiesler, Boneva, 2002), general Internet usage\* does not significantly differ by the report of depressive symptomatology.

\*the average number of days / week a youth is online

### Odds of Internet harassment given report of depressive symptomatology





## Review of Internet-based interventions (Ybarra & Eaton, 2005)

- ### Advantages of Internet-based interventions
- Cost-effective
  - Easy to scale up
  - Overcome some barriers to traditional services: stigma, anonymity, transportation, cost
  - Ensures fidelity of intervention
  - Self-paced and allows the user to tailor the intervention to them

- ### The healthcare provider and the Internet
- The Internet will never *replace* traditional services.
  - Because of its wide reach however, the Internet can *enhance* the care received from providers.
  - Also, the Internet may provide services or information for people who would not otherwise access care for various reasons: stigma, transportation/distance to clinic, money, etc.

## Online support groups

- Bring together a group of people with similar interests / challenges to support each other in their behavior change efforts.
- Similar to traditional support groups
- Anonymously explore feelings
- Social factors neutralized

## Online support groups

- Demand for online support groups is high.
- 28% of a self-selected sample of online users in the United States indicates that their online searches are mostly for online support groups (Boyer et al., 2002).

## Online support groups

Comprehensive Health Enhancement Support System (CHESS) is a replicable online support including discussion groups, resource area, etc. Reported outcomes for HIV (Boberg, Gustafson, & Hawkins, 1995) and breast cancer (Gustafson et al., 2001; Gustafson et al., 1998) modules include significant improvements in:

- Emotional health,
- Cognitive functioning,
- Quality of life measures,
- Relationship with their provider,
- Confidence in making decisions, and
- Information competence

## Group therapy for behavioral change

- Tends to be more structured than online support groups
- Has a trained healthcare provider 'leading' group

## Group therapy for behavioral change

### Smoking cessation (Schneider & Tooley, 1986).

- Pilot study, N=16, motivated to quit
- Online support group moderated by a mental health professional.
- Enhanced with 4-week self-directed behavior management program (e.g., self-report diary of smoking, supportive messages)
- 5 participants were abstinent 90 days post-quit, a rate similar to many traditional programs

## Group therapy for behavioral change

### Eating disorder prevention (Winzelberg et al., 2000)

- Randomized control trial, N=60, college woman at risk
- 8-week structured intervention with a moderated-led psycho-educational component. Discussion group, self-monitoring journals, and behavior monitoring exercises.
- Intervention group had significantly lower drive to be thin and improved body image 3 months post-intervention.

## Self-directed therapy

- Similar to 'bibliotherapy'
- Individuals access the Internet site and work through the modules on their own.

## Self-directed therapy

- Depression
  - Overcoming Depression on the Internet (ODIN; Clarke et al., 2002):
    - 8 modules, homework guide, "thought helper"
    - Depressive symptomatology similar between intervention and control groups at RCT study end.
  - MoodGYM (Christensen, Griffiths, & Korten, 2002):
    - 5 modules, homework, interactive game
    - Significant decreases in depressive and anxiety symptomatology observed pre-post test among self-selected sample.
    - Ybarra and colleagues are preparing to modify MoodGYM for adolescents

## Self-directed therapy

- Anxiety
  - FearFighter (Kenwright, Liness, & Marks, 2001)
    - Aimed at reducing symptoms of anxiety disorder.
    - 4 sections: Fear, panic, phobia, and education
    - Clinical sample using the program while in an office-setting:
      - Significant symptom alleviation pre-post test;
      - Results similar to traditional therapy.
      - High drop-out rate.

## Self-directed therapy

### Substance abuse prevention/early intervention:

- Coping matters (Matano, Futa, Wanat, Mussman, & Leung, 2000)
  - Offered through employers
  - Supplement traditional services from managed care organization
  - Aimed at moderate drinkers
  - RCT (N=8,567) ongoing

## Self-directed therapy

- Others being studied (National Institutes of Mental Health, 2005; crisp.cit.nig.gov) :
  - Parenting skills intervention (Severson et al.);
  - Youth problem behavior (Clarke et al);
  - Child / family tobacco use prevention (Sullivan et al.);
  - PTSD (Litz et al.); and
  - Families and individuals affected by schizophrenia (Rotondi et al)

## Synopsis of current literature

- The Internet is an influential environment that is shaping and affecting youth today
- The Internet is a powerful tool that can modify the behavior of some youth
- Adult Internet-based behavioral interventions have reported positive results



## Opportunities for future research



## Interventions tailored to resource-poor populations

Given the relative cost-effectiveness of scaling up Internet-based interventions, this is a yet-untapped resource that could be integrated into a comprehensive prevention and intervention programs in resource-poor settings.



## Youth-based interventions

- Child-based Internet intervention research online is lagging behind that of adults.
- This is ironic given the large numbers of youth online and the general integration of Internet technology into the daily lives of our youth (UCLA Center for Communication Policy, 2003).



## Conclusions

- The Internet is an important new resource for intervention and prevention efforts.
- The web's wide scope represents an opportunity to reach people that may not otherwise seek treatment either because of stigma, access to providers, or need for privacy.



## Conclusions

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- Early results suggest that behavioral interventions can affect positive behavioral change and self-efficacy.
- As the Internet continues to grow in popularity, innovative and rigorous research is needed to utilize its technology as an aid in public health approaches to youth-based health treatment and prevention.



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## Questions