

Is it a Question of Trust? How search Preference Influence Forum Use

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How many of you have searched
health information online?

Seeking health information online is becoming **increasingly** common

25% of Internet users seek or have read online peer reports about health conditions
Fox, S (2011)



Factual, Institution-Produced Content

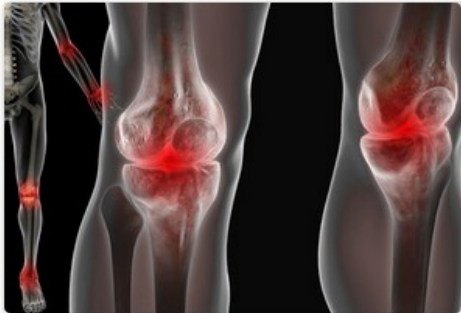


WebMD
symptomchecker


Go

Health Conditions


- ADHD
- Allergies
- Anxiety Disorders
- Arthritis
- Asthma
- Back Pain
- Bipolar Disorder
- Cancer
- Cholesterol
- Cold, Flu, & Cough
- COPD
- Depression
- Diabetes
- Eye Health
- Fibromyalgia
- Heart Disease
- Heartburn/GERD
- Hypertension
- Migraines
- Multiple Sclerosis
- Osteoporosis
- Rheumatoid Arthritis
- Sexual Conditions
- Skin Problems




What Is Lupus?

Learn symptoms, who's at risk, and how it's treated. 

◀ ● ○ ○ ○ ○ ○ ○ ○ ▶





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11 quick tips.




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Tips to wake up more beautiful.


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MERS FAQ




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Heart Attack Warning Signs & Risk Factors 



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Myths About Alcohol




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- Green Tea Smoothie Recipe
- Shopping for Foods With Omega-3s 
- Ditch the Diet for Intuitive Eating 

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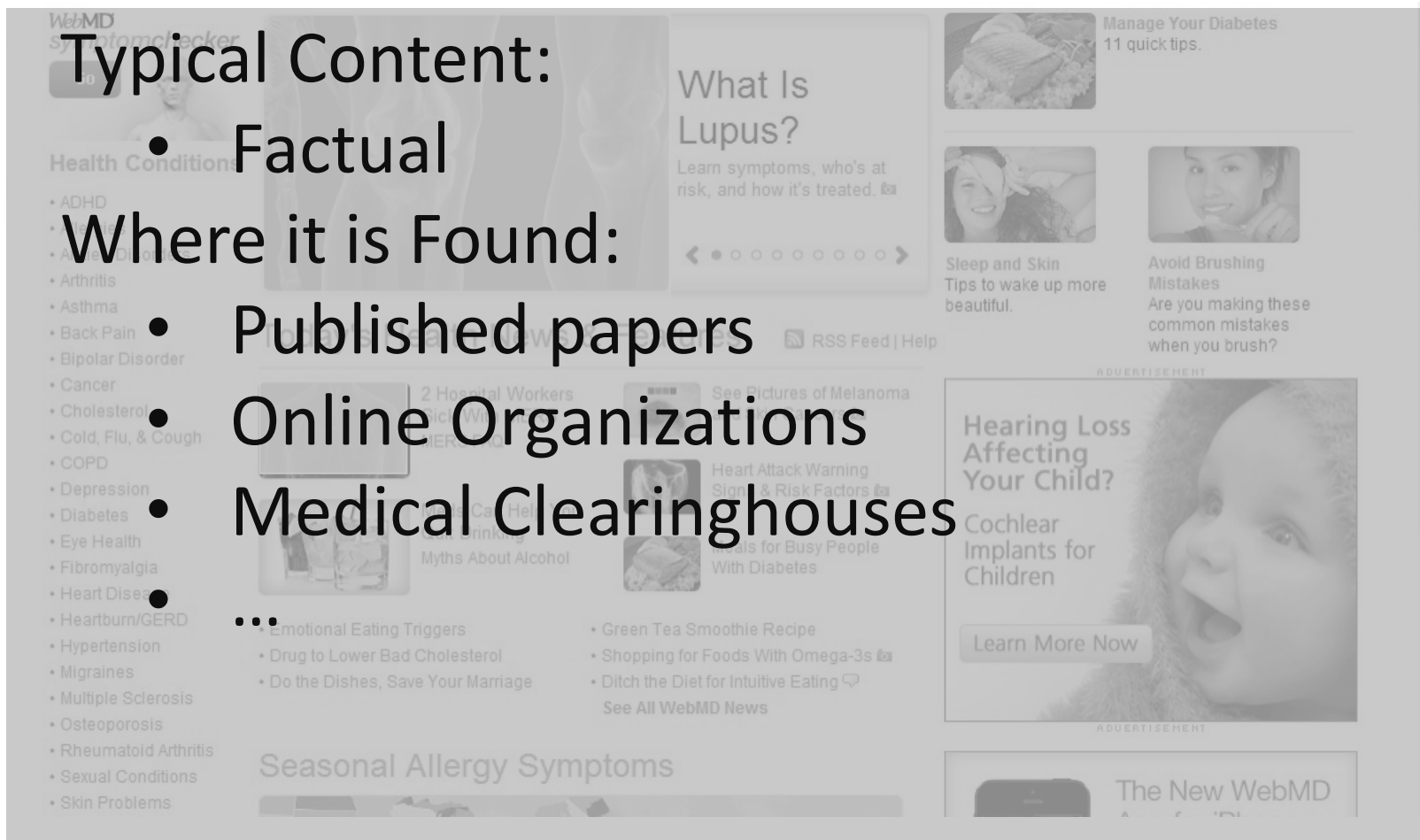
Factual, Institution-Produced Content

Typical Content:


- Factual

Where it is Found:

- Published papers
- Online Organizations
- Medical Clearinghouses



Experiential, Peer-Produced Content













FORUMS
BLOGS
ARTICLES
GROUPS
THE LUPUS SITE

TODAY'S POSTS
MARK CHANNELS READ
MEMBER LIST

If this is your first visit, be sure to check out the [FAQ](#) by clicking the link above. You may have to [register](#) before you can post: click the register link above to select the forum that you want to visit from the selection below.

Home

FORUMS
LATEST ACTIVITY
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Directory	Topics	Posts	Last Post
Welcome			
 Announcements Site-related announcements	57	167	 Reminder if you have tech problems or problems ... by Joanne 04-07-2014, 08:38 PM
 Introduce yourself New here? Introduce yourself & get to know other members	2,532	18,267	 Having hard time getting a diagnosis by SleepyInSeattle 05-13-2014, 01:41 AM
 Tech and test Use this forum to test post, get used to the board controls and features, and post questions for technical help or advice.	93	502	 Can I still see who viewed my profile? by keebler 04-14-2014, 12:40 AM
Lupus			
 Lupus News Read the latest news on Lupus and related conditions. (Closed to member posting.)	93	305	 Merck KGaA teams up with Pfizer to spotlight new I... by lazylegs 04-08-2014, 04:03 PM
 Lupus Awareness and Research For members to post about lupus research and awareness events.	162	1,324	 SLE drug trial - LY2127399 by keebler 05-03-2014, 01:31 AM

Experiential, Peer-Produced Content

The Lupus Site Message Boards

FORUMS BLOGS ARTICLES GROUPS THE LUPUS SITE


Typical Content:

- Experiential, personal stories

Where it is Found:

- Online Forums
- Blogs
- Support Groups

Lupus ...

 Lupus News Read the latest news on Lupus and related conditions. (Closed to member posting.)	93	305		Merck KGaA teams up with Pfizer to spotlight new I... by lazylegs 04-08-2014, 04:03 PM
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Claim: Both **experiential** information and **factual** information may impact people's health decision making

Our study explores the conditions that lead to **trust** in **experiential vs. factual** information

What leads to trust (in general?)

Mayer et al. 1995

Extrinsic factors

Intrinsic factors

Kelton et al. 2008

Trust in **information**

Hoeken 2001

Personal history

Whether to Trust ?

Little is known about how users come to trust the material they encounter

Hypotheses:

H1. People *vary in their trust* in Institution-produced vs. Peer-produced content

H2. People's *preference* for Institution-produced vs. Peer-produced content *affects search behavior*

Study of Trust in Health Information Seeking

Demographic and historical questions about experience with chronic conditions

New scales for measuring proclivity to trust peer vs. institutional and experiential vs. factual content

Questions about a recent health search

Live search task

- validate questionnaire responses
- use machine learning to predict factual vs. experiential using (see paper)

Survey Participants

62 Participants recruited from a pool

25% male, 46% students

Aged 19 to 76 (med 26)

Overall healthy (87%)

Most search for health info online 'often' (96%)

Knowledgeable about one or more chronic diseases (81%)

H1. People vary in the type of content they trust

Created two scales

- Trust in **Institution**- vs. **Peer**- produced content (adapted)
- Trust in **Factual** vs. **Experiential** content (developed)

Trust in Institution- vs. Peer-produced content

Adapted from an e-commerce scale McKnight et al. 2011

Institution

That website provides competent information

That website provides unbiased information

I am comfortable making health decisions based on information I find on that website

...

Answers are: Strongly disagree; Somewhat disagree; Neither disagree or agree; Somewhat agree; Strongly agree; N/A

Peer

That forum provides competent information

That forum provides unbiased information

I am comfortable making health decisions based on information I find on that forum

...

Scale Performance

Chronbach's *alpha* was .888 for the **Institution** trust questions, and .899 for the **Peer** trust questions.

Trust in **Factual** vs. **Experiential** information

Factual

Did you look for claims supported by research studies

Did you look for agreement among experts

Did you look for claims supported by statistics?

Did you look for success rates?

...

Answers are: Mostly; Some; Not much; Not at all

Experiential

Did you look for claims supported by people's stories

Did you look for agreement in online discussion groups

Did you look for claims supported by blog articles?

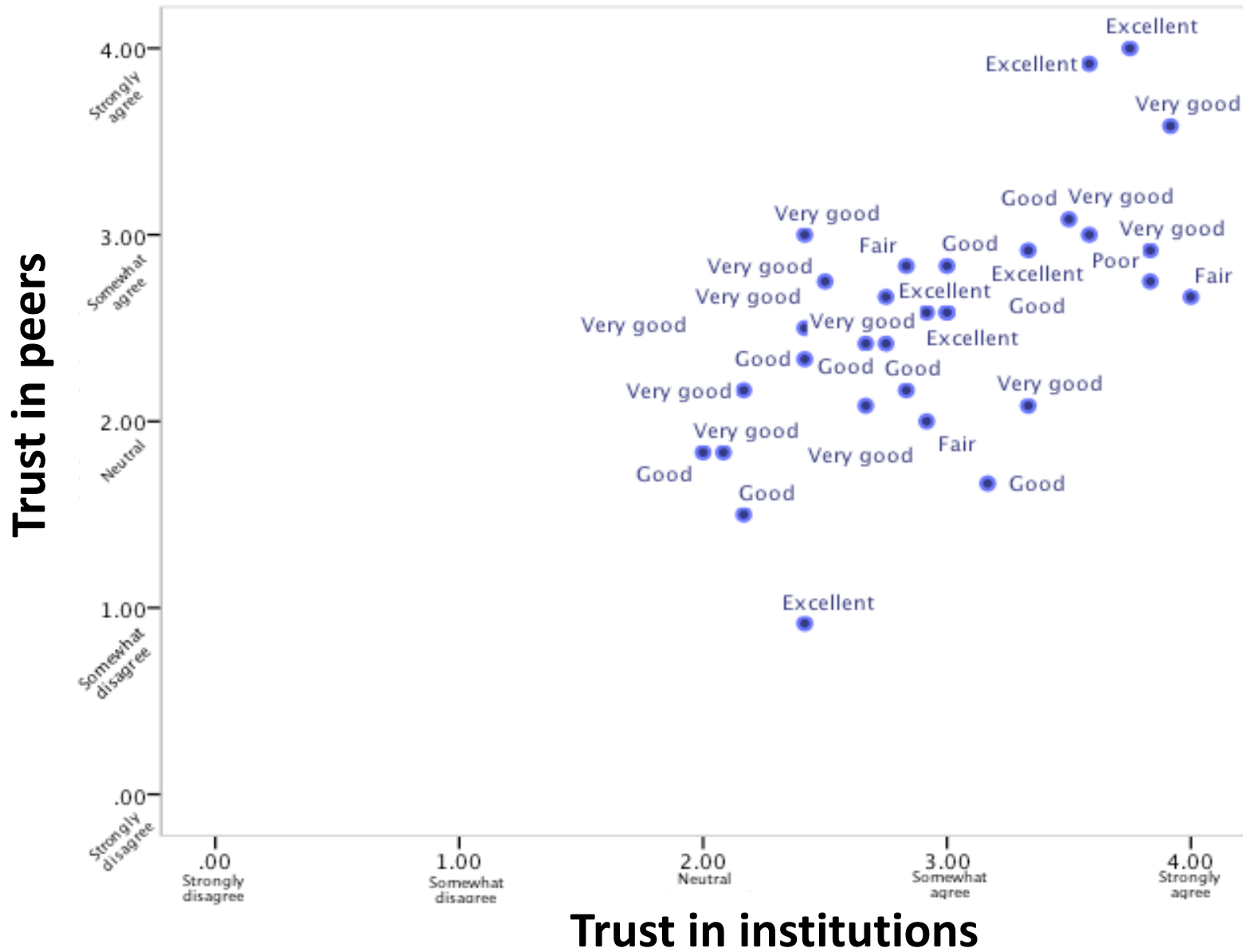
Did you look for success stories?

...

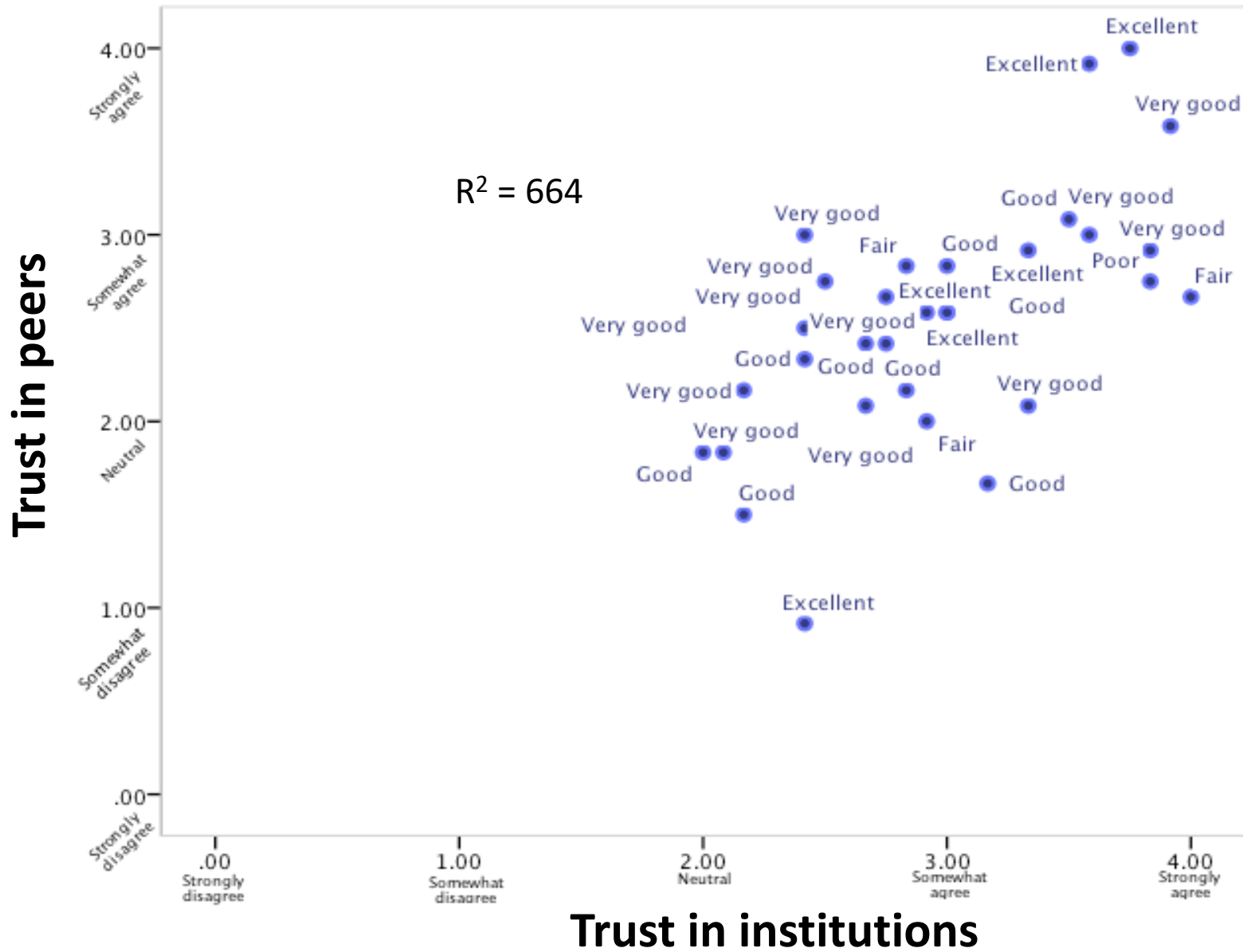
Scale Performance

The **Factual** subscale accounted for 52% of the variance; Chronbach's *alpha* = .904

The **Experiential** subscale an additional 14% of the variance; Chronbach's *alpha* = .902

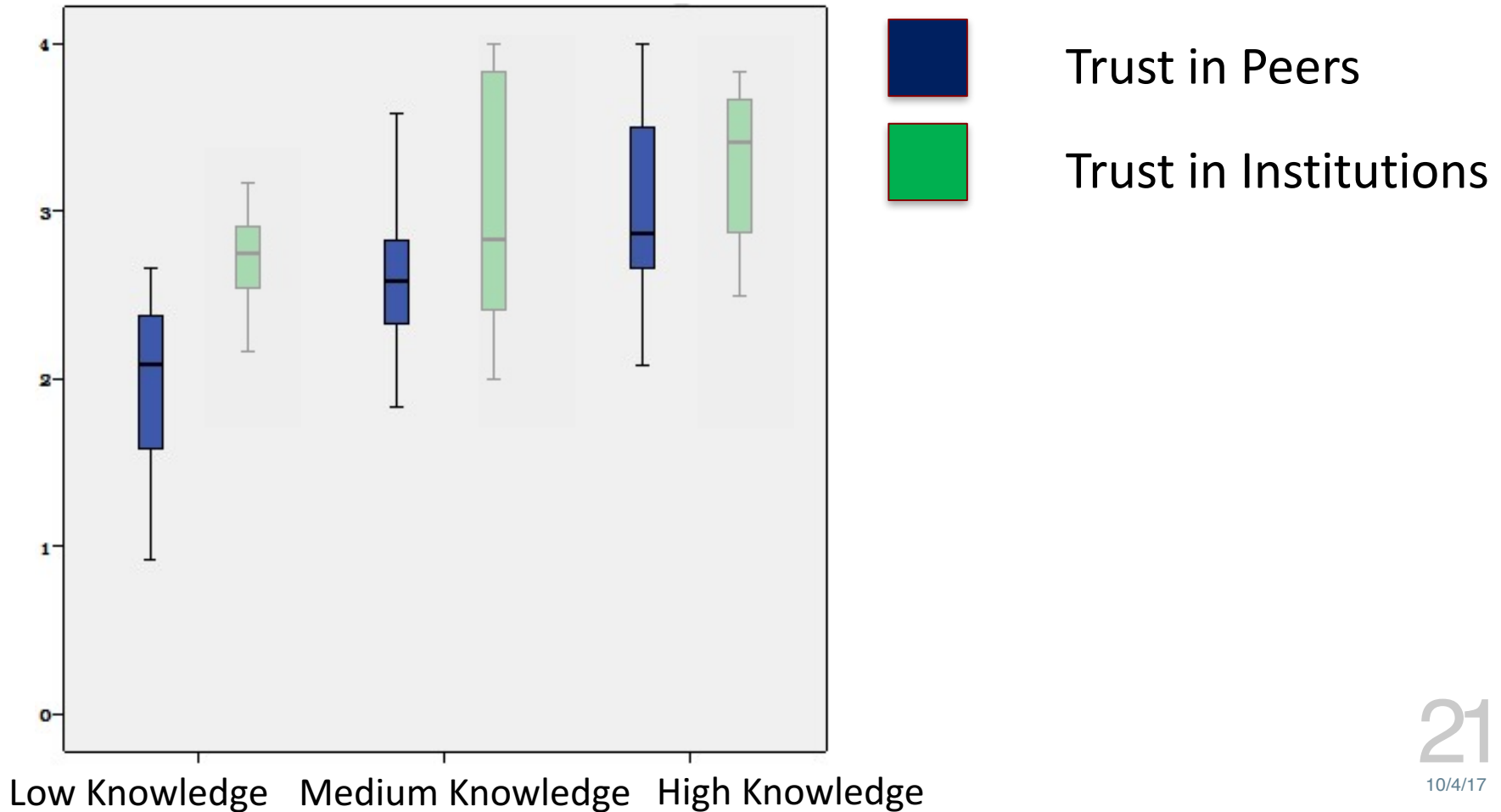




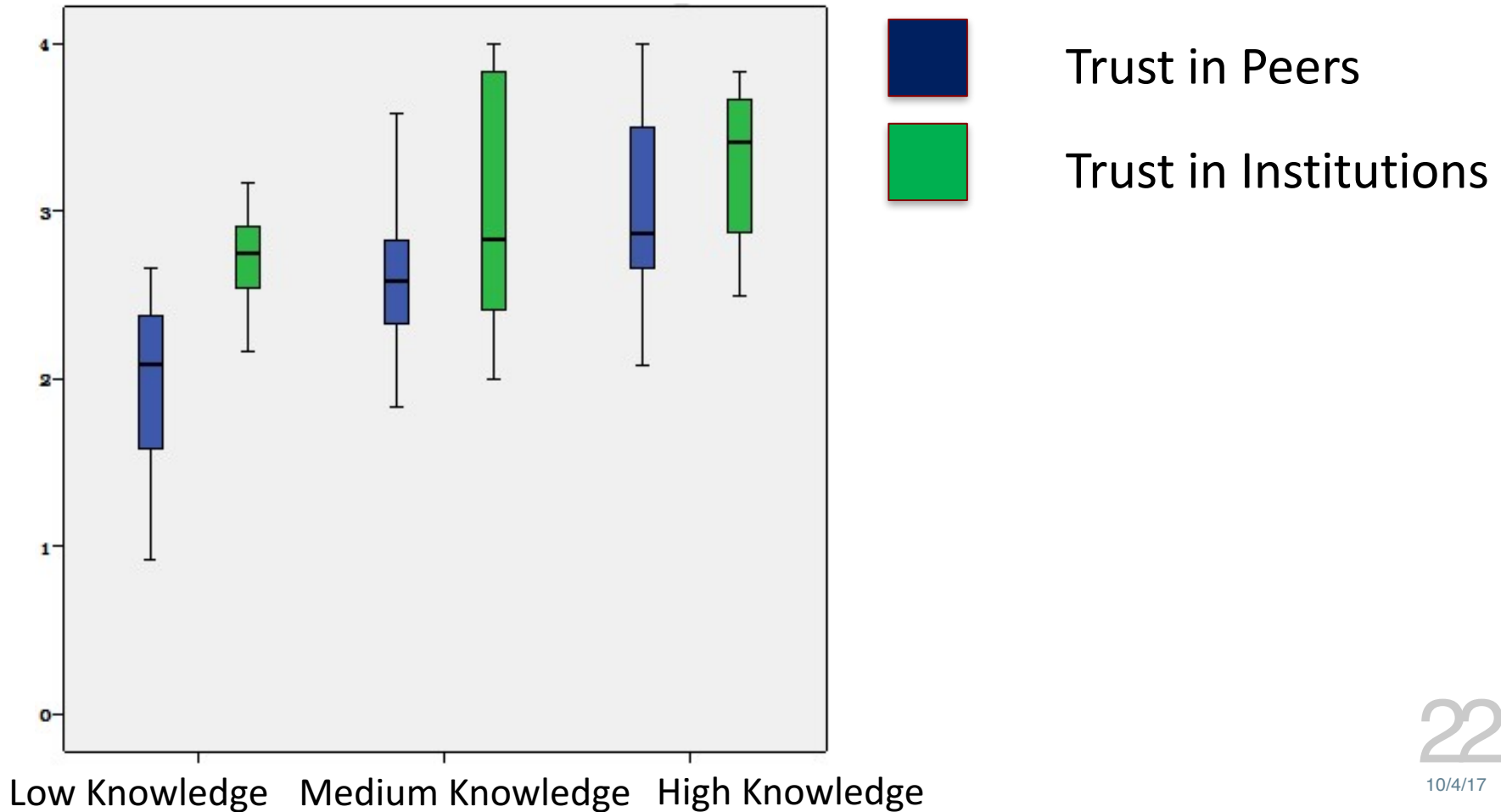


Trust in Peers Increases with Knowledge

$F(2, 26)=4.416, p<.05$



Trust in Peers Increases with Knowledge



Types of trust not correlated

- Facts & Institutions not correlated
- Experience & Peers not correlated
- One possible explanation is that people who trust peers believe them to be good sources of both facts and experiences, and similarly for institutions

Analysis of Search Behavior

We asked

- Think of a time you looked for health information online
- Several questions about that search
 - What were you looking for
 - For whom
 - When did you start & end your search
 - Did you find what you were looking for

Participant Data about Searching

WebMD very popular (fits with past work)

– *has both peer and institution content*

Only one person used a forum only site

Using data from offline people was reported

Participants had strong opinions about peer-produced content

“It's very hard to tell whether I can trust these people's answers on the forum--I would like more than just anecdotes.”

Versus

“It seems like low risk and there was more mention of success stories as well as mention of more formal opinions of doctors.”

Limitations

- Relatively small sample
- Relatively healthy sample
- Surprising result in which scale on peers vs. institutions did not correlate with scale on facts vs. experience

Hypotheses

H1. People vary in their trust in Institution-produced vs. Peer-produced content

H2. People's preference for Institution-produced vs. Peer-produced content affects search behavior

Discussion

- Found support for hypothesis that people vary in their trust of **Institution-** vs. **Peer-produced** data.
- Promising results for scales
 - Institution & Peer scale based on prior work; prominent in our analysis.
 - Fact & Experience scale new, not correlated with Institution & Peer as expected.

Conclusions and Future work

- Live search task with data from peers and institutions
- Improve on machine learning for predicting presence of fact vs. experience (make more general)
- Collect data on performance of scales with less healthy population

Thank you!

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Scale Correlations

Facts & Institution	Experience & Peers
$R=.148$ ($p=.344$)	$R=.386$ ($p=.029$)