

Using Twitter for Prenatal Health Promotion:
Encouraging a Multivitamin Habit
Among College-Aged Females



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Background

- Growing use of Social Networking Sites (SNSs) for promoting health
- Women age 18-29 as SNS “power users”
(Chou et al., 2009; Pew Research Center, 2012)
→ Potential as a health promotion tool to reach younger women.
- Use of Twitter for health promotion (Gold et al. 2011; Park et al., 2011)
 - Potential to spread quickly
 - Message’s ability to snowball

Neural Tube Birth Defects (NTDs)



- Highest rate of unplanned pregnancies in young women
(Lindsey et al., 2009; Thomas et al., 2010)
- NTDs occur due to inadequate periconceptional or lack of folic acid intake before becoming pregnant. (Helinski et al., 2004)

→ Health campaigns to reduce the rate of NTDs among young women

Multivitamin Promotion



- Multivitamins are a convenient and affordable way to ensure adequate intake of folic acid.
- However, overall rates of multivitamin usage remain very low, particularly among young women. (Lindsey et al., 2009)

 **Research Purpose**

- To investigate how best to use Twitter as a health promotion tool to reach young women:
 - How to effectively communicate the important benefits of folic acid to young women
- Focusing on “real world” usage:
 - Promoting multivitamins which contain folic acid
 - Real world worth-of-mouth content, via retweets

 **Tailoring**

Promotional messages developed for a particular subset of people → frequently used in public health campaigns

↓

Message tailored to a **specific individual**

- **Tailored health** messages are more effective than non-tailored messages (Skinner et al., 1999)
→ Need for further exploration of SNSs



 **Priming**



Effects of viewing of a message have on an individual's subsequent thoughts/ behaviors related to the content.

- Intensity and the recency effects
- Disappear over time

- “Real life” primes from media influence health behaviors (Harris & Graff, 2011)



 **Research Hypotheses**

Hypothesis 1 >

Participants exposed to multivitamin promotion messages will exhibit **more positive beliefs** about multivitamins.

Hypothesis 2 >

Participants exposed to multivitamin promotion messages will exhibit **stronger intentions** to start a multivitamin habit.

- Theory of planned behavior (TPB) (Ajzen, 1985, 1986)



Research Questions

Question 1 >

Will participants **retweet** messages sent to them?

Question 2 >

Will having seen the messages previously (**priming**) and rating them to determine their preferred tweet (**tailoring**) impact the likelihood of **retweeting**?

Study 2

Study 1

- Online survey (n=295 female undergraduate students)
- **Experimental group** (n=144) were exposed to multivitamin promotion tweets and answered a series of questions **vs. Control group** (n=151).
- Measures
 - Beliefs
 - Attitudes, subjective norms, perceived behavioral control, and intentions (TPB; Ajzen & Fishbein, 2005)
 - 7-point Likert-type scale

Multivitamin Promotion Messages

- Nine multivitamins promotion messages were designed to address important multivitamin benefits.
 - Beauty
 - Internal health (e.g., vision)
 - General health (e.g., healthy living)
 - Prevention (e.g., cancer)
 - Nutrition

What's happening?

Timeline @multi_vitamins Activity Searches - Lists -

multi_vitamins Multivitamins
Two hours into dinner and he's still talking about himself? Keep your energy up with a multivitamin.

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What's happening?

Timeline @multi_vitamins Activity Searches - Lists -

multi_vitamins Multivitamins
By taking a multivitamin, you increase cell growth, meaning new healthy skin, nails, and hair. Hello, gorgeous.



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Results

- Participants exposed to multivitamin promotion messages on Twitter did not exhibit positive beliefs significantly more than participants who were not exposed to those messages ($t = .42, p = .68$).
 - H1 was not confirmed.
- Participants exposed to multivitamin promotion messages on Twitter did not generate
 - significantly positive attitudes toward multivitamin intake ($t = -1.50, p = .06$).
 - subjective norm more in support of taking multivitamins ($t = .45, p = .65$).
 - higher perceived control over multivitamins intake ($t = -1.06, p = .29$).
 - higher intentions to take multivitamins ($t = -1.69, p = .09$).
- The results did not support H2.

Study 2

- female undergraduate students (n=247)



Online Survey

- **Experimental group** (n=125) rated the extent to which each message motivated them to take multivitamins and their intentions to pass each tweet along to others (**vs. Control group**; n=122).
- Later, were asked to provide their Twitter ID.



Study 2



Tracking Retweeting Behavior

- Subjects only selected from those who provided their Twitter ID (n=78).
- Participants received a multivitamin promotion tweet, which they rated the highest (message priming and tailoring) (**vs. control group**; received one randomly assigned promotion tweets)
- The researcher kept track of whether or not the subjects retweeted those tweets to others on Twitter.



Results & Discussion

- Only one subject (from the experimental group) retweeted the multivitamin promotion tweet to others on Twitter.
- This suggests young women are neither likely to retweet multivitamin promotion messages on Twitter in general or when primed with tailored messages.
- Additional consideration of future research
 - Message credibility issue
 - Trust in the use of Twitter – trust of Twitter itself, of Twitter users in general, of specific accounts that are familiar or unfamiliar to users
 - Priming and tailoring

Limitations & Future Research

- Use of a college student sample
 - ➔ broader studies beyond college students are necessary.
- Use of an unfamiliar Twitter account
 - ➔ Should consider testing the impact of Twitter users likely to be known or influential to the target audience.
- Focus on better ways to use Twitter an active health promotion tool— especially the potential to tap into existing social networks, trust, and credibility.

