

# 2020 Online KT Conference: Social Media Strategies for Knowledge Translation

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Center on  
**KNOWLEDGE TRANSLATION FOR  
DISABILITY & REHABILITATION RESEARCH**

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# Facebook as a Knowledge Translation Strategy

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# Knowledge Translation

- ▶ KT is “a multidimensional process designed to ensure that new, research-based knowledge ultimately improves the lives of people with disabilities.”
  - addresses real issues faced by people with disabilities
  - offers helpful information or solutions related to those issues,
  - is presented in ways that make it accessible to and feasible for the intended users, and
  - is disseminated or distributed effectively.

(From: NIDILRR’s Long Range Plan 2018–2023)

- ▶ The needs of users must be considered during each phase of research, including customizing the message and customizing the dissemination strategies.

# Why Facebook for Knowledge Translation?

- ▶ Pros and Cons
- ▶ Facebook reported in May 2020 that there are....
  - 2.60 billion monthly active users
  - 1.73 billion daily active users
  - Seven out of 10 (69%) adults in the U.S. claim that they use Facebook.
    - <https://www.oberlo.com/blog/facebook-statistics#>

# Facebook and Individuals With Disabilities

- ▶ Shpigelman & Gill (2014)
  - Survey (n = 172)
  - 69% viewed Facebook a minimum of once daily.
  - 44.2% logged up to 30 minutes each visit.
- ▶ Tsaousides, Matsuzawa, & Lebowitz (2011)
  - Survey (n = 96) individuals with traumatic brain injury (TBI)
  - 59.6% reported using Facebook regularly.
  - 70% reported a need for increased knowledge of Facebook.
  - 50% expressed interest in learning how to navigate the social networking site.

# Facebook Use and Study Participants

## ▶ How often do you use Facebook?

(n = 67)

- 3% said that they do not use Facebook.
- 6% said that they rarely use Facebook.
- 9% said that they use Facebook one to four times a month.
- 30% said that they use Facebook at least once or twice a day.
- 25% said that they use Facebook at least three or four times a day.
- 27% said that they use Facebook more than five times a day.

# Facebook and Study Participants (continued)

- ▶ How often do you use Facebook to find information on services/supports on employment for individuals with TBI?
  - 62% said that they NEVER use Facebook to find information on employment.
  - 15% said that they use Facebook once or twice a month.
  - 14% said that they use Facebook three or four times a month.
  - 9% said that they use Facebook daily or more often to find information on employment.

# Research Questions

1. Is social media—specifically, a “secret\*” Facebook group led by a peer mentor—effective in increasing the knowledge and use of evidence-based research on employment of individuals with TBI?  
\*2019 – Private and Hidden in Search
2. What is the relationship between participant demographics and the effectiveness of the KT strategy to impact evidence-based employment knowledge and use by individuals with TBI?

# Methods

- ▶ Concurrent Mixed-Methods Design
  - Quantitative
  - Experimental pre-post test control group design
    - Post-satisfaction survey
  - Qualitative
    - Content analysis of Facebook verbal interactions
- ▶ Data Collection
  - Pre-Post knowledge assessment for both groups
  - Facebook posts and comments including number and types of posts and comments, tone of comments, number of post views
  - Satisfaction survey for Facebook group

# Study Details

- ▶ **Intervention**
  - Facebook (3 months, five times a week)
  - E-news (One per month, for three months)
- ▶ **Sample Population**
  - TBI survivors
  - 18 years of age
  - Legal guardian
  - VA Clubhouses and Brain Injury Association LISTSERV
- ▶ **Online Consent Process**
- ▶ **Random Assignment**

# Study Details

## ▶ Intervention

- 34 Facebook group
- 33 LISTSERV/news group

## ▶ Private and Hidden in Search Facebook Group/Participant Confidentiality

- Highest privacy setting
- Not visible on Facebook searches by non-members
- Not indexed by Google
- Non-members will not see the group information in their news feed.
- If someone has the URL to the group, they cannot gain access without being invited to the group.
- Group members are able to see each other's names.

# Study Details

- ▶ Group Leaders
  - Jay McLaughlin, M.S. – Peer mentor
  - Katherine Inge, Ph.D., O.T.R. – Content mentor
- ▶ Facebook Group
  - Minimum of one posting per day Monday through Friday by either of the mentors
  - Employment focus content
- ▶ LISTSERV Group
  - Monthly “e-news” with employment content disseminated by e-mail

# Quantitative Data Analysis

- ▶ Descriptive Statistics
- ▶ Paired t-tests
- ▶ Independent t-tests
- ▶ Mixed Model ANOVA

# Qualitative Data Analysis

- ▶ Participants were all assigned pseudonyms for the data analysis and presentation of findings.
- ▶ Content analysis was performed of Facebook of communication among research team facilitator and participants.
- ▶ Communication was read multiple times by four research team members.
- ▶ Coded content included types of information presented and participant response to this information; valence of communications was coded (e.g., negative, positive, ambivalent, etc.); number of responses per type of communication.

# Study Participant Demographics

	Facebook Group	Control Group	Chi-Square Value	<i>p</i>
Gender			4.062	0.044*
Female	16 (48%)	24 (73%)		
Male	17 (52%)	9 (27%)		
College Degree			3.985	0.046*
No	17 (59%)	11 (33%)		
Yes	12 (41%)	22 (67%)		

# Race/Ethnicity

	Facebook Group	Control Group	Total
Prefer Not to Say	1 (3%)	2 (6%)	3 (5%)
Asian	1 (3%)	1 (3%)	2 (3%)
Black/African American	2 (6%)	2 (6%)	4 (6%)
Hispanic	2 (6%)	0	2 (3%)
White	27 (82%)	28 (84%)	55 (83%)
	33	33	66

# Demographics

	Facebook Group Mean (SD)	Control Group Mean (SD)	<i>t</i> -value	<i>p</i>
Age	43.19 (11.86) Range 21–66	44.71 (9.53) Range 32–67	0.560	0.577
Years Since Injury	17.23 (12.80) Range 2.50–35	11.23 (6.23) Range 1.25–22.75	1.637	0.120
Number Jobs Before Injury	3.84 (2.82) Range 0–10	3.89 (2.44) Range 0–10	0.72	0.943
Number Jobs After Injury	3.18 (3.57) Range 0–10	1.91 (2.39) Range 0–10	1.64	0.106

# Significant Overall Efficacy Results

Over both, there was a significant change in knowledge scores, with participants in both group increasing their knowledge by the end of the study:  $t(66) = 5.117$ ,  $p < 0.0001$ , 95 CI = 2.552, 1.112. The mean pretest score for all participants was 2.96 (SD = 2.23), and the mean post-test score was 4.79 (SD = 2.09), with a moderate effect size (d) of 0.63.

# Significant Pre-Post Test Results by Group

## ▶ Facebook Intervention Group

- Significant difference from pre-test to post-test,  $t(33) = 2.948$ ,  $p = 0.006$
- Mean pre-test score = 2.85 (SD = 2.23)
- Mean post-test score = 4.35 (SD = 2.07)
- Moderate change (effect size  $d$ ) of 0.50

## ▶ News Control Group

- Significant difference from pre-test to post-test,  $t(32) = 4.308$ ,  $p = 0.0001$
- Mean pre-test score = 3.06 (SD = 2.25)
- Mean post-test score = 5.24 (SD = 2.03)
- Moderate to large change (effect size  $d$ ) of 0.75

# Compared Post-Test Scores Were Not Different

- ▶ No significant difference between Facebook intervention and news control group:  $t(65) = 1.773$ ,  $p = 0.081$ , 95 CI =  $-1.891, 0.112$ .
- ▶ The non-significant difference ( $d$ ) was small to moderate at 0.43.
- ▶ Facebook intervention mean = 4.35 (SD = 2.07)
- ▶ News control mean = 5.24 (2.03)

# Demographic Covariates in Model

- ▶ Mixed Model ANOVA
- ▶ Covariates in Model
  - Number of years since injury
  - Number of jobs before injury
  - Number of jobs after injury
  - Age
  - Education Level
  - Gender

Between group difference was not significant:  $p = 0.642$ .

# Item Analyses

- ▶ Participants had significant changes in knowledge on seven of the 10 items on the knowledge assessment.
- ▶ The three items for which no change in knowledge occurred concerned:
  - Knowing all the services included in supported employment (Q 6).
  - Knowing the services to expect from the supported employment service provider after you are successful on the job (Q 8).
  - Knowing what to do if a VR counselor says that you have a severe disability and you are not eligible for services (Q 9).

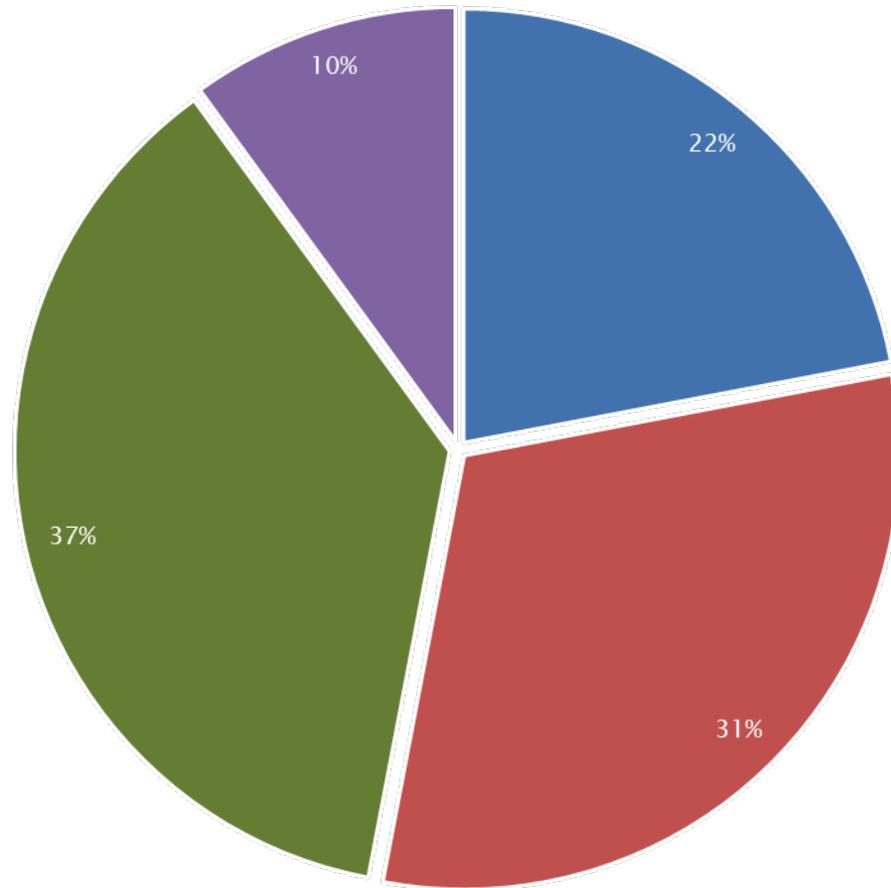
# Facebook Satisfaction Survey (n = 12)

- ▶ 35% response rate
- ▶ 75% agreed Facebook group information was relevant.
- ▶ 83% Facebook is a good way to exchange employment information.
- ▶ 91% agreed it was important to have a leader for the group.
- ▶ 91% felt comfortable posting in the group.
- ▶ 83% said they benefited from joining the group.
- ▶ 91% would recommend the group to another person with TBI.

# Changes in Facebook Group

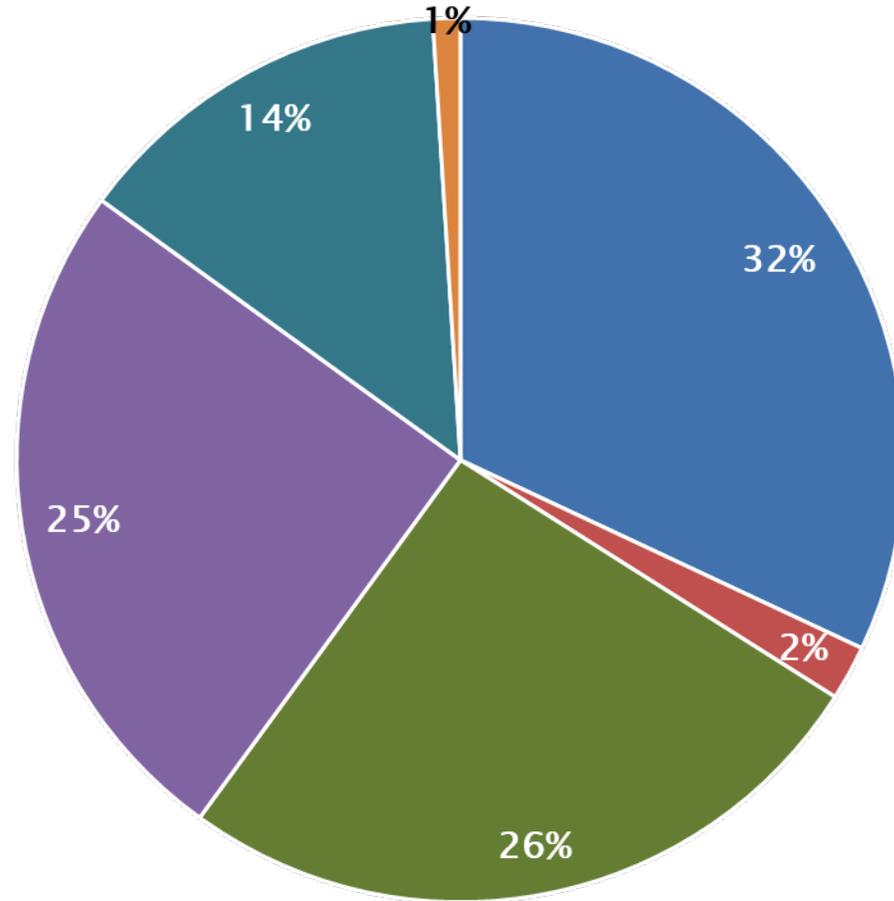
- ▶ 33% said nothing should be changed.
- ▶ *Single Responses*
  - *Continue the group.*
  - *Expand it to brain injury and not just TBI.*
  - *Be more visible.*
  - *Concern about security.*
  - *Focus only on work.*
  - *Have a topic each week.*

# Percentage of Total Facebook Posts



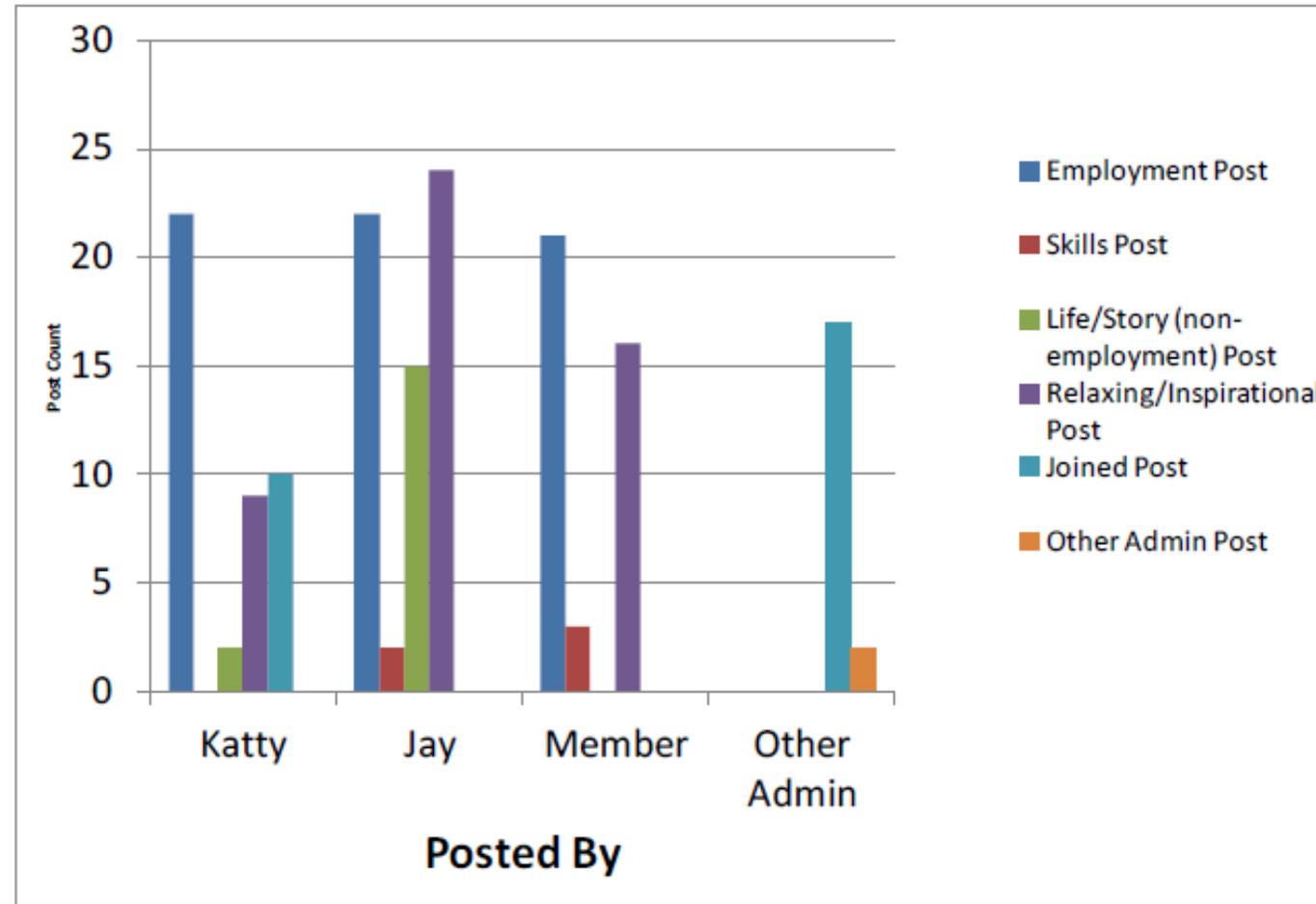
-  Katty
-  Jay
-  Member
-  Other Admin

# Percentage of Facebook Posts\*



- Employment Post
- Skills Post
- Life/Story (non-employment Post)
- Relaxing/Inspirational Post
- Joined Post

# Total Post Type by Poster\*



# Current Employment Theme

- ▶ Concerned about employment experiences.
- ▶ Tone was mostly ambivalent or negative.
- ▶ The ambivalent comments concerned the complexity of living with TBI, being proactive, and coping with challenges.
- ▶ The negative comments had to do with poor job fit and lack of confidence.

# Employment Themes Discussed by Participants

- ▶ Current Employment
- ▶ Disclosure
- ▶ Seeking Accommodations
- ▶ Employment Goals
- ▶ Seeking Employment
- ▶ Past Employment

# Coping With Challenges

*I worked a late shift last night, and now go in for a 7-hour day shift. This is my “new” Friday and Saturday pattern. I am learning not to “overdo” or overpack my Friday time before work, and give myself an extra hour of rest Saturday morning. If I don't remember to give my “new brain” this little bit of resting, I “suffer.” I will make more mistakes with paperwork, more verbal mess ups (...), and go much slower. I work 4 days a week, 7.5-hour shifts. I am trying to build stamina and endurance, with a touch of patience and humor.*

# Poor Work Fit

*The difficulties at work for me involve noise levels (retail store), task switching (designing to answering customer questions about the non-floral parts of the store...). The retail store managers don't always speak slowly enough or write things down, so my job coach and I keep thinking of new ways (like recording or videotaping) so I can keep up. I struggle with the paperwork, putting marks in the wrong columns; reading is an issue too. To keep my focus, I work with my back to the front entrance—so I focus on the flowers, not on people coming into [the store] to shop. I still take pleasure in making beautiful arrangements and am glad I can still work—but I must admit, I wish I was working in the back warehouse, or a quiet space.*

# Lack of Confidence

*I have the “new employee” confidence thing to work on, plus these other issues. I know I can do it, but I find that if I forget something or make a mistake, I panic and fear that my brain is regressing again. My boss and coworkers assure me that I’m doing a great job, and that I am coming in having to learn a lot in a short time (I’m replacing someone who is leaving in three weeks), but I still can’t stop from panicking when I screw up. I continue to work on this.*

# Positive

*Since I am nine years removed from the accident that I received my TBI, I have my successes and downfalls with work. One thing I have noticed is due to my personality, is the willingness to accept too much work sometimes. Even when given just a few tasks, I am always eager to perform the work well and do it right the first time. I place a lot of pressure upon myself to complete the work as soon as possible, and though I never feel pressure from my supervisors, I work at completing these tasks as fast as I would have prior to my TBI. When I make mistakes, I have learned from them and work on not making the same mistake again. I look at it as the first time is a mistake; continuing the mistake is just not putting the effort forth to learn.*

*One thing I have found is that the leaps and bounds of technology have allowed me to find tools to utilize to make my life simpler. I am able to create and update schedules utilizing my laptop, a desktop, or on my phone. I can carry notes and reports with me since Microsoft has allowed me to place everything in a cloud, which I can access from anywhere.*

# Disclosure Theme

- ▶ Questions concerning disclosure
- ▶ Positive comments concerning experiences in disclosing their disability
- ▶ Negative consequences of not disclosing

# Positive Experience With Disclosure

*I recently got a job, and during the interview I was honest with my (future) boss. I stressed my past experience and how it could help her, and I agree with Jay that eye contact is important—especially when I got into the subject of my injury. She could see that I was being honest with her, and she could also see that I was confident in my abilities despite my past (and sometimes current) struggles.*

# Negative Consequences for Not Disclosing

*I've had a few jobs now. My longest job I've held now was for four years. Going in working at a job, I didn't tell them about my TBI. Then later on, I would get laid off 'cause they say I was too slow.*

# Accommodations Theme

Miley's positive experience with accommodations at work:

- ▶ *Although my surgeon assured me that I wouldn't have any long-term problems, I struggle with sustained attention, cognitive fatigue, and executive function issues. I still work full time, but with an accommodation that allows me to work from home two days a week (fewer distractions, so I burn less cognitive energy).*

# Difficult Experiences in Receiving Accommodations

*I have always been fairly independent and “with it” cognitively working full time. Trying to get accommodations has been like pulling teeth—in fact, I finally just bought my own keyboard, because management said it would be too expensive.... I had to fight for almost two years to get a headset and finally had my neurologist write a letter saying that I had to have it. At review time year after year, they bring up my medical issues. I feel like I can’t get any roadblocks to be successful with a person who has several disabilities.*

# Employment Goals Theme

Participants were exploring realistic jobs they would like to have. They were ambivalent to positive about possible opportunities.

# Seeking Employment Theme

- ▶ Spoke of strategies in interviews
- ▶ Anxiety and fear they experience in seeking employment in light of their injuries

# Past Employment Theme

- ▶ Learning experiences
- ▶ Job stress and quitting

# Study Limitations

- ▶ Cognitive Problems Related to Brain Injury
  - Slower processing or “taking in” of new information
  - Difficulty understanding both written and spoken messages
  - Difficulty with spelling, writing, and reading
  - Problems with recent memory
  - Difficulty starting tasks and setting goals to complete them

# Study Limitations (continued)

1. Intensity of the intervention
2. Instrumentation
3. Recruitment
4. Participant's interest in employment
5. Participant's willingness to share information

# Implications for Knowledge Translation

1. Recruitment procedures
2. Initial focus groups with participants
3. Ongoing communication
4. Vary information strategies (e.g. audio, video, written information)
5. Instrumentation

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