



@rowenaforsoyth

Health professionals' use of online communities for interprofessional peer education

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We acknowledge the tradition of custodianship and law of the Country on which the University of Sydney campuses stand. We pay our respects to those who have cared and continue to care for Country.



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Cyberpsychology Research Group

<https://www.sydney.edu.au/medicine-health/our-research/research-centres/cyberpsychology-research-group.html>

Biomedical Informatics and Digital Health Theme, School of Medical Sciences,
Faculty of Medicine and Health, The University of Sydney



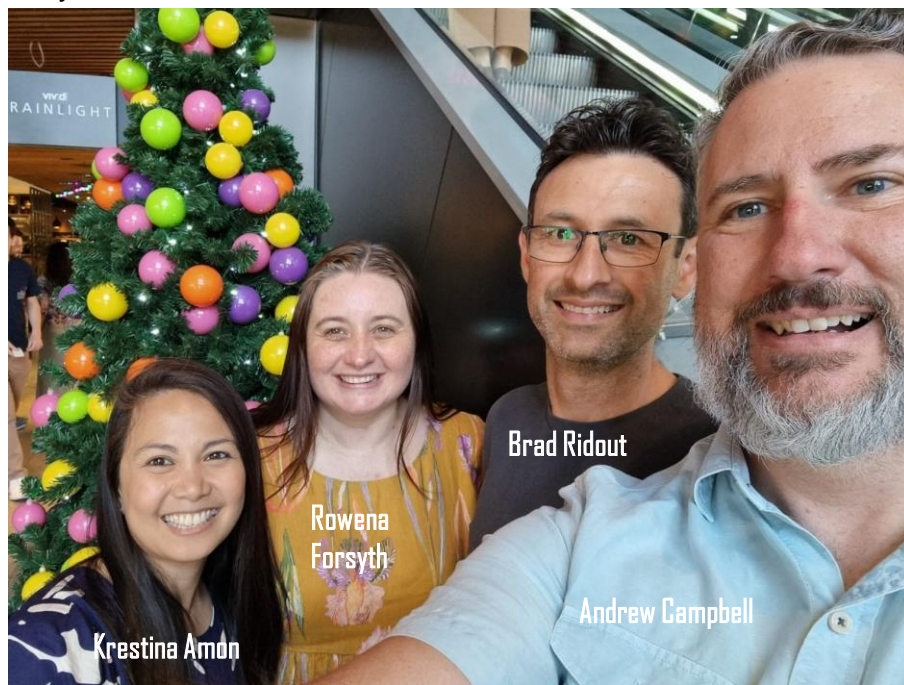
Cyberpsychology Research Group

Investigating the impact of technology on human behaviour

We are dedicated to working with industry partners, NGO's and government organisations on digital solutions that aim to positively impact health outcomes, as well as expanding education and training in the field of cyberpsychology and digital health.

Get in touch

Collaborate or



Brad Ridout

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Andrew Campbell



Background

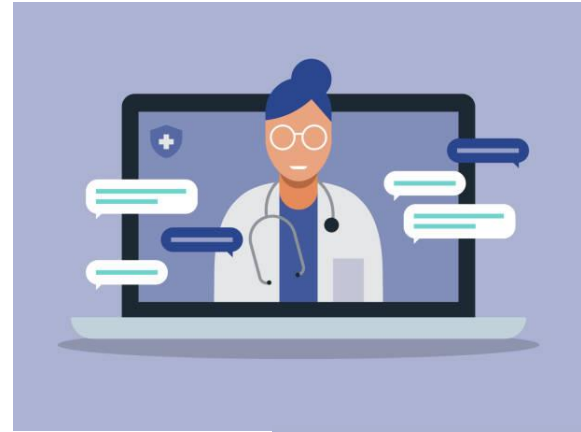


- Definition of 'Online Communities'
 - Groups of people or organisations who interact with others through virtual mediums about common interests or concerns (Williams & Cothrel, 2000)
 - Engagement can be through online social networks (including social media), discussion boards/threads/forums, chat rooms, listserv, and blogs (Kordzadeh & Warren, 2013)



Background

- Health professionals face major challenges in healthcare practice due to **increased burden, stress, burnouts, and uncertainty** within the work environment. (Hummel et al., 2021)
 - Especially during COVID-19 pandemic (Singh et al., 2021)
- Online community use increased among health professionals (Ni et al., 2020)
 - Effective tool for **enhancing education, communication, interaction, and networking** with patients (Gebbia et al., 2021)
 - Commonly associated with **lower levels of anxiety and depression** (Ni et al., 2020)





Gaps in Literature



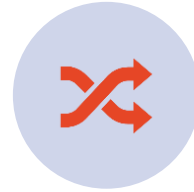
Exploration of a **range of health professionals** and their use of online communities



Exploration of a **range of online communities**



Health professional engagement with their **fellow health professionals** and peers



Limited use of **mixed-methods approach** in previous research



Factors that assist in **sustaining knowledge sharing** in online communities



Brown Hospital Medicine @Brow... · 3h

A 30-year-old male w/ a 20 pack year smoking hx presented with pain & discoloration in both hands. He began having pain in his hands about 1 wk earlier & noticed discoloration at the tips. Pulses in both upper extremities were diminished. What is the likely diagnosis? #MedTwitter



53 72 401

2:02



Dr Rob Thomas @drhungo · 3h

Replying to @BrownHospMed

Thromboangiitis obliterata (TAO)

Inflammatory, nonatherosclerotic, occlusive vascular dx

- small/medium artery & veins
- upper & lower extremities

criteria

- <50yo
- history
- distal extrem ischaemia
- +ve U/S
- exclusion of autoimmune dx

#MedTwitter #MedEd

Buerger's Disease (ThromboAngiitis Obliterans)

- Progressive, Inflammatory, Segmental, Occlusive, Nonatherosclerotic (PRISON)
- Occlusion of small & medium sized vessels with skip lesions

Risk factors: SMOKER

- Smoking
- Male (Young < 40)

Other risk factors

- hypercholesterolemia
- hypertriglyceridemia
- hypercoagulable state
- Known diabetes (DM 2)
- Elderly patients
- Raised BP

Clinical features: BUERGER SCRAP'S

- Segmenting thrombosing vasculitis
- Claudication (intermittent)
- Raynaud's phenomenon
- Associated with smoking
- Pain, even at rest
- Superficial nodular phlebitis

Diagnosis:

- Angiography: Corkscrew collaterals
- Duplex scan

Management: V-SAFOLA

Tweet your reply



2:03



a blood pressure on too.

1 4

Elias Said, MD, FACEP @MdFacep · 1h

Replying to @BrownHospMed

What do you do if this patient comes to your ER?

CBC, PT/PTT/INR, CRP, ESR, hypercoagulable profile (AT-III, Prot. C, S, Lupus AC, Anti=Phospholipid, Duplex Art. vascular study (if abnormal-likely, UEs arteriogram), Urine DS, & P. Ex. (Allen test, sens)

Vaculitis clinic referral

4



PROJECT IKELS™ @iamikels · 3h

Replying to @BrownHospMed

Buerger's disease (thromboangiitis obliterans)

4



Deb Mendelsohn @MendelsohnDeb · 2h

Replying to @BrownHospMed

Thrombangitis Obliterans or Beurger's disease. Saw it once; heartbreaking.

4



Kamran Imtiaz @KamranImtiaz... · 57m

Replying to @BrownHospMed

Tweet your reply





Cynthia Cooper

@DrCindyCooper

Adult Hospitalist. 🌟 Poems for med nerds. 📖
Common, obscure, fun with words. 📖 Want more?
follow me. 🌟 @HarvardMed @MGHCEF
@MGHMedicine. Views own/not advice

📁 Medical & Health ⓘ a.co/d/5llwvcz

📅 Joined April 2018

314 Following 21.7K Followers



Cynthia Cooper @DrCindyCooper · 5h

Tanka Name the Disease

#medtwitter

#MedicineinBrief

Lump on side of face
Grown out of saliva space
Hugs the facial nerve
Benign mixed, hard to resect
High recur rate disaffects



24 17 136



Cynthia Cooper @DrCindyCooper · 4h

Pleomorphic adenoma aka benign mixed tumor. Three histopath features. Most common salivary tumor. Many superficial lobe parietal gland. High recurrence after resection, can undergo malignant transformation. Facial nerve injury, Frey syndrome, fistulae parts of morbid outcomes.

1 1 35



Cynthia Cooper @DrCindyCooper · 4h

Pleomorphic adenoma review:

PMC

Pleomorphic Adenoma: A Systematic Review
ncbi.nlm.nih.gov

2 11





A 39 year old woman develops muscle weakness, double vision and drooping eyelids. She is diagnosed with Myasthenia Gravis.

Yesterday's results

WHAT IS THE UNDERLYING PATHOPHYSIOLOGY?

Type 1 hypersensitivity reaction	11%
Type 2 hypersensitivity reaction	51%
Type 3 hypersensitivity reaction	24%
Type 4 hypersensitivity reaction	14%



Yesterday's answer



Congratulations if you said type 2 hypersensitivity reaction.

Type 2 hypersensitivity reactions relate to antibody mediated tissue damage or functional loss caused by the targeting of specific antigens.

In Myasthenia Gravis, antibodies target the nicotinic acetylcholine receptor and related proteins thus impeding transmission of impulses across the neuromuscular junction.

Participate in our free study platform...

[EXAM-PLUS.ORG](https://exam-plus.org)



Study Design

Phase 1 – Online Questionnaires

- Demographic Questionnaire
- Engagement in Online Communities
- Online Community Participation
- *Social Media in Healthcare* (Bhuiyan et al. 2020)
- *Technology Acceptance Model* (McGowan et al. 2012)
- *Social-Connectedness Scale* (Grieve et al., 2013)
- *Physician Well-Being Index* (Dyrbye et al., 2013)

Phase 2 – Semi-structured Interviews

- Original narrative qualitative data:
 - Experiences and perceptions
 - Purpose of use
 - Nature of roles and interactions
 - Sense of social connectedness
 - Sense of identity as a member of online community



Eligibility criteria

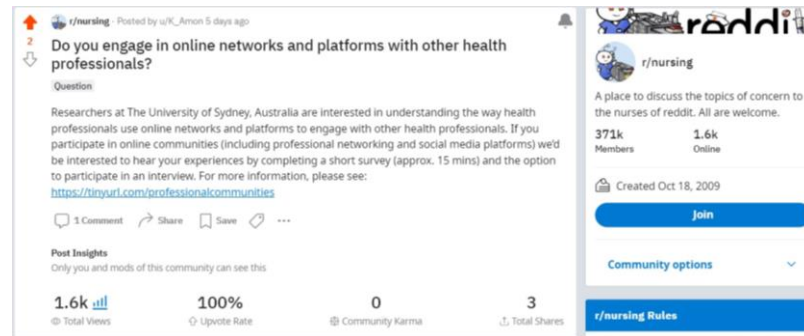
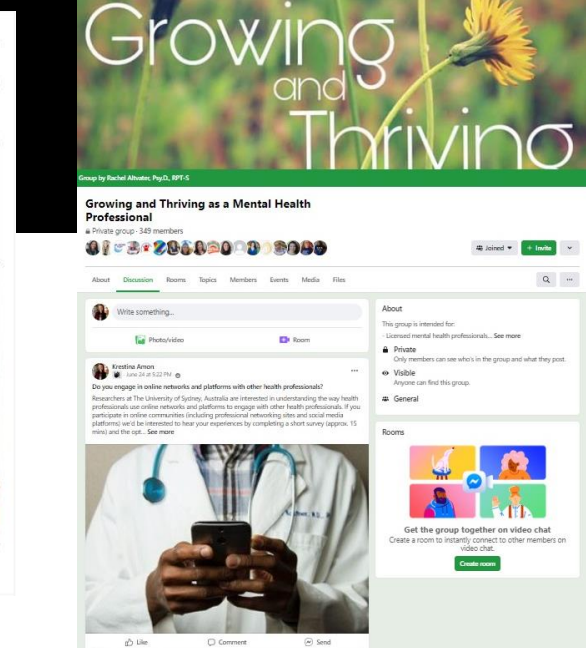
- i) having completed a health profession qualification,
- ii) using at least one online platform to engage with other health professionals,
- iii) aged eighteen years or over,
- iv) fluent in speaking, reading, and writing in English, and
- v) have access to a phone or computer with a stable internet connection.

MEDINFO23

8 – 12 JULY 2023 | SYDNEY, AUSTRALIA

Recruitment

- Since June 2022
 - Tweets, retweets
 - Reddit posts
 - Instagram direct messages to health professionals 500+
 - Hospital and health service staff newsletters
 - Australia, New Zealand, Indonesia, USA
 - 140 contacted, 17 responses, 8 agreed
 - Professional associations
 - Australia, New Zealand, USA, Europe
 - 80 contacted, 21 responses, 6 agreed





Results – sample – 22nd May 2023

- 188 surveys were collected.
 - 114 were incomplete or screened out for not fulfilling eligibility criteria and were therefore removed.
 - **74** completed questionnaire responses available for analysis
- 22 indicated interest in interview
 - 6 responded to email follow ups
 - **6** have been interviewed and transcribed.

Results – Participant Demographics

- Phase I Sample Size = 74
- 54.05% between ages 30 – 49
- 78.38% self identified as females
- 74.32% resided in Australia/Oceania
- 62.16% working full time

Table 1. Participant Demographics

	Participants N (%)
Age	
18-29	17 (22.97)
30-49	40 (54.05)
50-64	15 (20.27)
65+	2 (2.70)
Gender Identity	
Male	15 (20.27)
Female	58 (78.38)
Unclear	1 (1.35)
Current Location of Residence	
Australia/Oceania	55(74.32)
Africa	3(4.05)
Americas	11(14.86)
Asia	2(2.70)
Europe/UK	1(1.35)
Middle East	2(2.70)
Study/Employment Status	
Working full time	46(62.16)
Working part time	25(33.78)
Working casually	5(6.75)
Studying full time	9(12.16)
Studying part time	11(14.86)
Employed & on parental/other leave	1(1.35)
Retired	0(0.00)
Not employed & not studying	0.(00)

Results – Participant Demographics

- 29.73% with 10+ years of experience
- 44.59% employed in public hospital system
- 78.38% work in major city
- Medical Practitioners 31.08%
- Allied health 59.46%
- Other 9.46%

Table 1. Participant Demographics

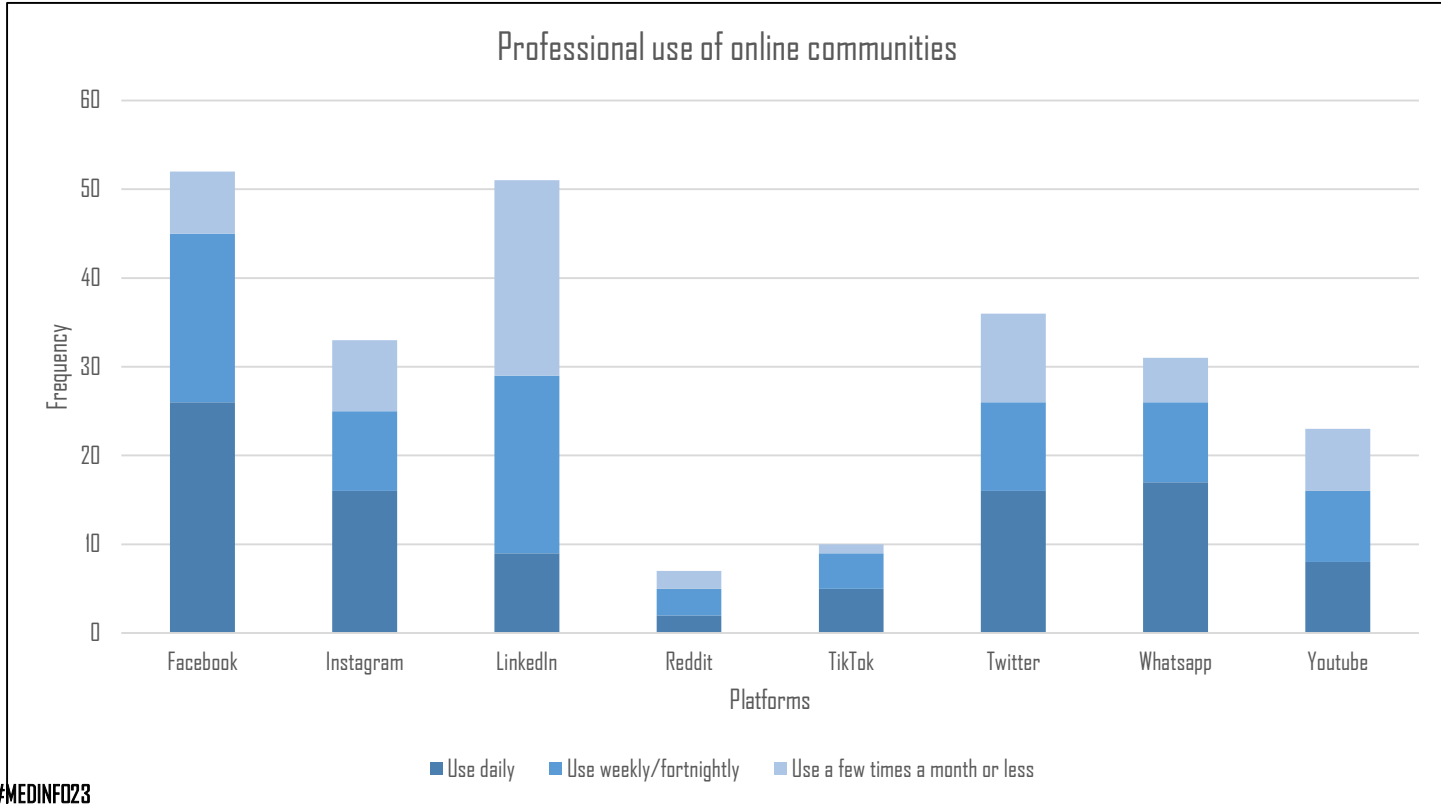
	Participants N (%)
Experience	
0-2 years	14(18.92)
3-5 years	17(22.97)
6-10 years	21(28.38)
10+ years	22(29.73)
Type of health care practice employed	
Solely public hospital system	33(44.59)
Solely private hospital system	5(75)
Mix of public and private hospitals	4(5.40)
Solely private practice	24(32.43)
Mix of public and private practice	8(10.81)
Location of employment	
Major city	58(78.38)
Regional centre	8(10.81)
Rural	8(10.81)
Medical practitioners	
Emergency physician	2(2.70)
Dentist	1(1.35)
Doctor	6(8.10)
Nurse/Registered nurse	12(16.21)
Pediatrician	1(1.35)
Surgeon	1(1.35)
Allied health	
Dietician	3(4.05)
Exercise physiologist	1(1.35)
Genetic counsellor	1(1.35)
Speech/language pathologist	9(12.16)
Occupational therapist	4(5.40)
Palliative care	1(1.35)
Pharmacist	5(6.75)
Physiotherapist	5(6.75)
Podiatrist	3(4.05)
Psychologist	10(13.51)
Rehabilitative care	1(1.35)
Other	
Education	2(2.70)
Health manager	1(1.35)
Medical laboratory scientist	1(1.35)
System analyst	1(1.35)
Unclear	2(2.70)



Online Community Platforms



Others include; instant messaging platforms (Signal, Discord, Telegram), profession specific websites and forums (AllNurses.com, podiatry forum, speech pathology forum, pharmacy club, physiotherapy association), filesharing platforms (Slack, Sharepoint, Dropbox, Microsoft Teams), and video communication platforms (Zoom, Skype).





Results – Evidence based content

[O]ften someone will ask a question, and it's like framed as a clinical case study, something particular about the patient, and you know the clinical problem they're trying to solve. ... So, I just, you know, provide an example in my experience, that could be kind of like this is what this is, what I would do, or, you know, have you tried this approach? The other day someone asked a really complicated question about, not so much, you know, 'what physiotherapy technique would you do?' but it was actually about more, 'how would you communicate something to a family?' because it was about a family who was trying to figure out whether they should actually go down a diagnostic pathway, given certain information about their child, and so, in that circumstance I actually just linked some really relevant academic papers that talked about that kind of that issue, and sometime, and like more ethical issues around that... here's some really relevant pages that you might like to explore to help figure out how you're going to work with family (P4, allied health)



Results – Collegial debate

[Y]ou could have a discussion say on medical marijuana... its use in people with chronic arthritis and chronic pain and you know people are linking papers in and saying 'hey what about this, this is, that's absolutely zero use, you say it's not addictive, but you know, there are these three papers that it is addictive', right. So that's something that I think is very exciting (P3)



Results – Engaging students & peers in education

I think [Instagram posts] cater to more medical students, junior trainees and nurses, GPs, at that sort of level, and so I wanted to showcase the breadth of [clinical specialty] and just give certain principles ... it's much simpler it's really bite sized and my content is very visual rather than a lot of words, so it's like a quick learning bite that that people can see (P2)



Results – Virtual education

We were going to run a face-to-face course [during COVID-19], because we couldn't do that, we then advertised it on Twitter instead to our community of practice... we had 1500 people turn up virtually to the course we ran including 150 from sort of lower-middle income countries that would have never known or had access to what we did.” (P1)



Ongoing analysis and future activities

- More recruitment – suggestions welcome!
- Social support, connectedness, reciprocity

Thank you!

- Contact me: rowena.forsyth@sydney.edu.au
- Twitter @rowenaforsyth
- Instagram @drrowenaforsyth @cyberpsych_sydney



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