RESEARCH POSTERS

Nick Skladnev

Design Tips

- “Elevator pitch”

- Lure
- Bait & Hook
- Line

Development steps

> Conceptualise

- Audience
- Guidelines
- Materials

> Development

- Sizing
- Outline of content
- Design
- Layout & flow

> Review

- Outside perspective & feedback

COVID era considerations – Digital Posters

> Take advantage of zoom function

> Embedded audio/video

> Hyperlinks

Tips for Designing Effective Presentations

A poster with the main title in 1½" sans serif

Developed by D. Stong, C. Dwyer, W. Kelly, B. Immel, and K. Wirdt
with materials donated by Penn State's Education Technology Services

Get the audience's attention and communicate your message quickly and succinctly.

Developing a Layout

Planning

Choosing and Using Color

Selecting Fonts and Using Text

Judges Checklist

Using Images

Viewers reading this line demonstrate the poster's success!

Continuous positive airway pressure treatment and systemic inflammation in obstructive sleep apnoea: a systematic review and meta-analysis

N. Skladnev[1], P. Marsden[1], S. Phan[1], & D. Zheng[2]

[1]: Sydney Medical Program, The University of Sydney. [2]: Centre for Big Data Research in Health, University of New South Wales.

BACKGROUND

- Obstructive sleep apnoea (OSA) is an increasingly prevalent condition of sleep disordered breathing that has been shown to exacerbate systemic inflammation, which in turn contributes to the plethora of metabolic and cardiovascular sequelae associated with OSA.
- There has been interest in determining whether the mainstay of therapy for OSA, continuous positive airway pressure (CPAP), can also reduce levels of systemic inflammation, though existing evidence is mixed.

OBJECTIVE

- This systematic review and meta-analysis took advantage of newly published randomised controlled trials (RCTs) in order to further elucidate the effect of CPAP therapy on inflammatory biomarkers in OSA.

METHODS

- **Systematic review:** MEDLINE, EMBASE, CINAHL, and CENTRAL databases, along with relevant reference lists were searched for RCTs up to 6th March 2018.
- Studies were restricted to OSA patients with an apnoea-hypopnoea index >5 via polysomnography, undergoing CPAP treatment of >1 weeks, and with inflammatory biomarkers obtained both pre- and post-treatment.
- Primary Outcomes: Serum levels of TNFα, IL6, IL10, and CRP.
- **Meta-analysis** using Review Manager version 5.3.
- I2 statistic for heterogeneity and sensitivity analyses conducted.
- Risk of bias assessed using Egger's & Begg's test, and Cochrane tool for risk of bias reporting in RCTs.

RESULTS

- A total of ten studies involving 1,417 OSA patients were included in the meta-analysis. Eight studies were pooled for CRP, six for IL6, four for TNFα, and one for IL10.
- Meta-analysis was inappropriate on IL10 as only one study was identified.
- There was significant heterogeneity detected in CRP post-treatment [df=7, p<0.0001, I²=90%] which was identified by sensitivity analyses to be due to three individual studies. There was no significant heterogeneity detected in any other endpoints.
- Risk of bias assessments detected no significant bias in any of the primary outcomes, and the quality of included articles was high overall.

RESULTS

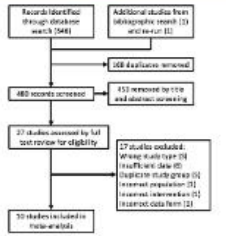

Figure 1. Flow diagram depicting study selection.

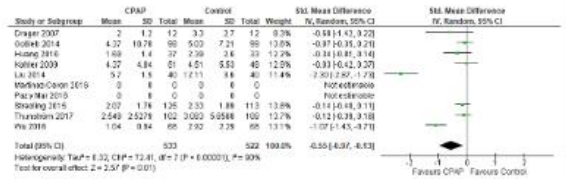

Figure 2. End of study comparison of CRP levels between CPAP and control groups.

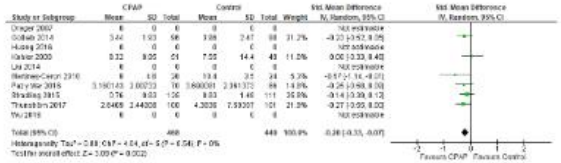

Figure 3. End of study comparison of IL6 levels between CPAP and control groups.

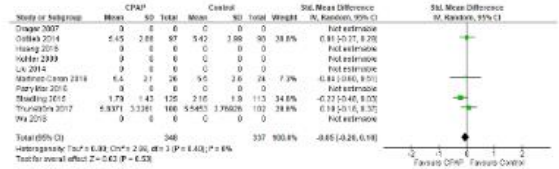

Figure 4. End of study comparison of TNFα levels between CPAP and control groups.

CONCLUSION

CPAP therapy can suppress levels of the inflammatory biomarkers CRP and IL6 in patients with OSA.

Though given the variability amongst studies, further investigation is warranted.

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THE UNIVERSITY OF SYDNEY

Neuroprotective pre-conditioning with dietary saffron: how much and how come?

Nicholas Skladnev, Jonathan Stone, Dan Johnstone

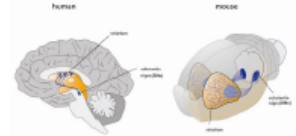
Discipline of Physiology, University of Sydney

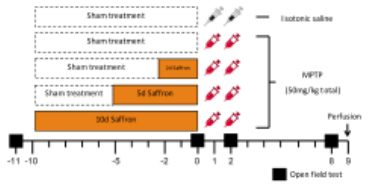
Introduction

- Neurodegenerative diseases continue to rise in prevalence but remain without effective treatment
- **Novel neuroprotectants** are thus needed to slow or stop disease progression
- Rapidly growing body of laboratory and clinical evidence for the ability of **saffron** to stabilise degeneration
- Recently demonstrated neuroprotective effect in **MPTP neurotoxin model of Parkinson's disease (PD)**
- **Dose response relationships** and underlying **protective mechanisms** are yet to be elucidated, and are the subject of this research

Methods

- **Disease model** – MPTP mouse model of PD
- **Treatment regime** – Pre-conditioning with dietary saffron (0.01% via water supply) for 2, 5, or 10 days
- **Outcome measures:** Open field tests (OFT) for assessing locomotive deficit; immunohistochemistry (TH) for dopaminergic neurons in substantia nigra (SNc), striatal neurons exhibiting abnormal firing (Fos)

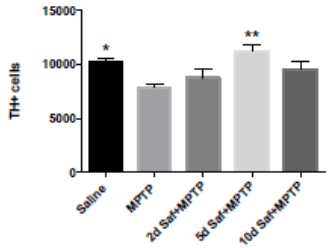




Results

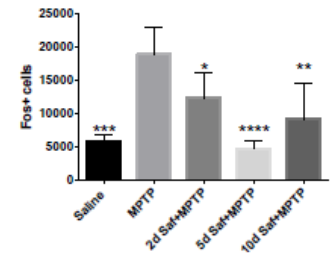
Can saffron mitigate dopaminergic cell loss in the SNc?

- MPTP intoxication causes significant reduction (~20%) of dopaminergic cells compared to saline controls (p=0.01)
- 5 days saffron preconditioning best attenuates dopaminergic cell loss (p=0.001)



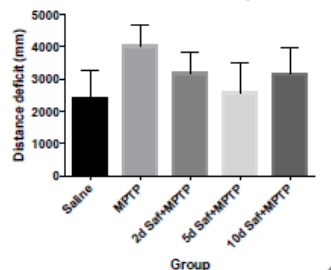
Can saffron mitigate increased abnormal firing activity in the striatum?

- MPTP intoxication causes significant increases (~300%) in Fos expressing cells
- All saffron doses significantly mitigate this increase (p<0.05)
- However, 5 days saffron pre-conditioning shows the strongest protective effect (~75% reduction) against MPTP



Can saffron mitigate locomotive deficits?

- Changes in total distance travelled pre vs post-injections
- Trend seems to match cellular pathology, but non-significant



*= p<0.05, **= p<0.01, ***= p<0.001, ****= p<0.0001, versus MPTP

Conclusions

- Saffron can protect against MPTP-induced Parkinsonian Neuropathology
- **5 days** of saffron pre-conditioning is **optimal**
- The mechanisms behind this will next be explored by RNA microarray

THE UNIVERSITY OF SYDNEY

THE BOSCH INSTITUTE
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The action of capsaicin in porcine coronary artery vasodilation

Niamh Ramsay
Supervisor: Dr Peter Johnson

Introduction

Capsaicin, the active component of the chilli peppers, is responsible for producing the heat characteristic of chilli. It is a highly selective agonist for transient receptor potential vanilloid type 1 (TRVP1) receptors expressed in sensory neuronal tissue. Its actions on vascular tissue have shown to cause a vaso-dilatory response, indicating possible therapeutic benefit for certain cardiovascular pathologies such as hypertension. (Ching et al, 2011)

As the role of capsaicin sensory nerves and TRPV1 in cellular mechanisms under normal and pathological conditions remains unconfirmed, this study aimed to clarify previous conflicting evidence. It has been previously determined that low dose capsaicin caused an enhanced relaxation despite application of TRPV1 antagonists, however, while it was speculated that this was achieved by nitric oxide synthase release, the release of NO was not quantitated. Thus it is yet to be ascertained that NO is entirely responsible for this mediation.

This study examined the effects of capsaicin on normal and denuded porcine coronary artery vasorelaxations and measured nitric oxide release following capsaicin application, thus aiming to determine the source of NO production thought to be responsible for such tissue relaxation.

Methodology

To ascertain NO release as the cause for capsaicin evoked vasorelaxations, and to also determine if results were endothelium dependent, this study examined the effects of capsaicin application on normal and denuded tissue. Porcine coronary artery rings were suspended in organ baths, and pre-contracted with either KCl or U46619, a stable thromboxane receptor agonist. The changes in isometric tension of the samples were then evaluated in response to capsaicin administration on tissue. Following this, a fluorometric analysis of nitric oxide levels in the organ bath effluent was performed to quantify the level of NO release in response to capsaicin application.

References

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Fuller, K. (2012). The effect of capsaicin on coronary artery vascular tone. Bond University: Varsity Lakes.

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Discussion

It was found that applications of capsaicin resulted in dose-dependent vaso-relaxations of the porcine arteries. Furthermore, it was determined that these relaxations occurred in tissue despite removal of the endothelium, yet, not to the same extent as normal samples. This result was seen to be much more evident in tissue pre-contracted with KCl, indicating that the NO release mediating such reactions were from a non-endothelial source.

Following fluorometric analysis, it was determined that an increase in capsaicin concentration caused a greater yield of nitrate/nitrite from the tissue sample. This response was seen in both normal and denuded artery rings, however, greater nitrate/nitrite production was seen in normal samples. From these results, it was speculated that an alternate source of NOS, outside the endothelium, was responsible for such NO release, supporting previous the findings of prevous studies (Fuller, 2012; Hans et al, 2012). It was recommended that future studies adopt methods to detect the presence of NOS isoforms in an attempt to ascertain the location of NOS causing NO production in response to capsaicin application.

Results

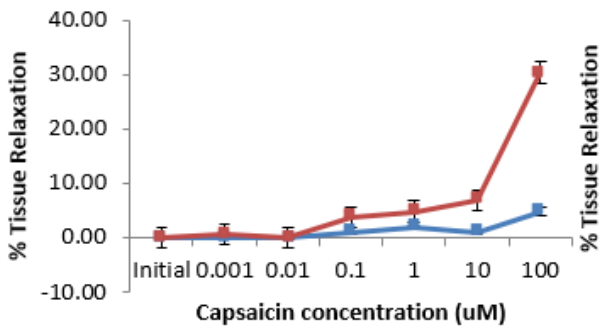

Figure 1: U46619 pre-contracted tissue % relaxation responses to capsaicin application, n=3.

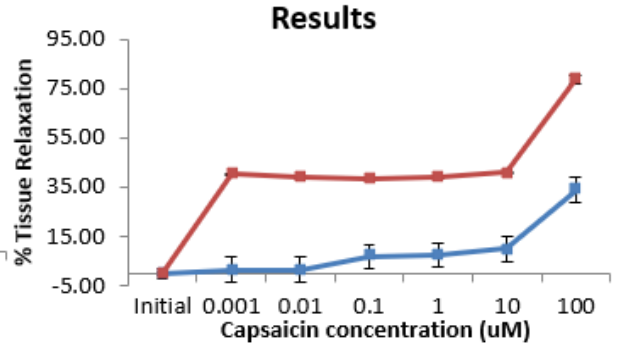

Figure 2: KCl pre-contracted tissue % relaxation responses to capsaicin application, n=2.

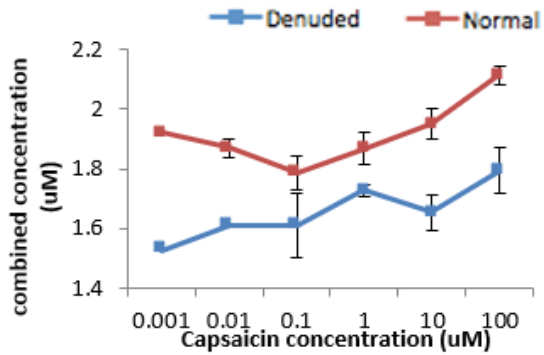

Figure 3: Fluorometric assay results of normal and denuded tissue samples, n=3.

Pre-implementation of Point of Care Testing in a General Practice Surgery

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[2] Inala Primary Care, Inala, QLD, 4007

INTRODUCTION

The burden of chronic disease on the individual and community highlights the need to improve patient management. In Australia, a considerable proportion of the population is affected by chronic disease, with specifically 4% of people affected by Type 2 Diabetes (T2D) (Bayram 2009). There are serious health risks associated with this disease, such as coronary heart disease and chronic kidney disease, as well as the risk of mortality being substantially increased in patients with T2D (Ali, Narayan & Tandon 2010; Shephard 2011).

Key to the management of diabetes is the regular monitoring of compliance with treatment; however, GPs face many barriers to achieving this. Lower socioeconomic status and language barriers are associated with patients having poorer health literacy, defined as the skills enabling access to, understanding and use of information in ways which promote and maintain good health (Nutbeam 2009). This results in problems with completing pathology testing and complying with treatment of their disease. It is thought that by introducing a better means of managing chronic disease whereby patients can more easily access treatment and monitor their disease, such as Point-of-Care Testing (PoCT), that this may be overcome and improve disease outcomes (Gialamas et al 2009; Laurence et al. 2008; Gill & Shephard 2010). If implemented effectively, PoCT could aid the primary care management of chronic diseases such as diabetes, hyperlipidemia and metabolic syndrome (Gill & Shephard 2010). As a result, this could alleviate stress on general practice and improve patient compliance with disease management, potentially leading to better health outcomes.

This study examines the different factors affecting the introduction of PoCT in four general practice (GP) clinics of differing socioeconomic areas with particular focus on patient pathology request compliance and staff perceptions of this new way to perform testing.

METHODS

1. The rate of patient compliance with pathology testing was examined. Three general practice clinics were involved in this part of the study and over the course of three months several factors pertaining to patient compliance of completing pathology testing was recorded. Specifically, gender, the number of times each patient was contacted, nationality, first language and, in the cases where it applied, the reasons for not completing requested pathology were recorded. These results were then compared between the sites.
2. Following this, patient workflow at each clinic was mapped to determine the processes including the time spent by staff when ensuring pathology requests had been completed by patients prior to their follow-up appointment.
3. Interviews were next conducted with several staff members from each clinic to examine the different approaches to patient recall, preconceptions of patient medication and pathology request compliance, views on PoCT, workplace culture and concerns of specific patient groups.

RESULTS

Practice Site	Perceived Percentage	Actual Percentage
Inala Primary Care	77%	77%
Jimboomba Medical Centre	75%	91%
Limestone Street Medical Centre	81%	70%

Table 1: Perceived versus actual pathology request compliance at each practice.

Figure 1: Actual reasons preventing pathology request compliance (at IPC).

Figure 2: Patient workflow processes at IPC.

DISCUSSION

An issue that became apparent over the course of this investigation was the level of patient non-compliance with pathology request. The major reasons supplied for this included language barriers in communication between patient and provider, socioeconomic disadvantage and poor health literacy such as forgetting appointments, losing pathology forms and not showing up to appointments. These reasons highlighted that such patients do not prioritise the monitoring of their chronic disease, possibly due to a lack of understanding of the importance such management has on their health.

Patient compliance with pathology requests could have also been affected by the practice's workflow protocols. These workflows evolved independently at each practice to deal with the need to have pathology results available at the time of consultation. When reviewing obtained rates of pathology non-compliance, it was seen at Jimboomba Medical Centre that these dropped from 31%-6% as a result of nurse follow-up.

Medical staff expressed positive perceptions of PoCT including the possibility of faster results obtained than with conventional testing, less stress for the patient and a great potential for doctors to manage patient treatment. However, staff were concerned with the limited range of testing currently available, staff training and the cost of the PoCT system as well as the impact the implementation of this technology would have on patient health involvement. This study found that 80% of staff interviewed believed that PoCT had potential in a GP setting, with the highest percentage of staff from practices in lower SES areas. Collectively, GPs believed that PoCT would improve health outcomes in cases where pathology compliance was poor and extensive workflow was required to overcome this process.

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TRANSMISSION DYNAMICS OF WATERBORNE PATHOGENS IN AUSTRALIA

Niamh Ramsay, Edward Waters
The School of Medicine, University of Notre Dame Australia

INTRODUCTION

The incidence of gastrointestinal illness, defined as two or more associated cases of diarrhoea and/or vomiting in a 24 hour period, has been increasing over the last decade in Australia.[1,2]

Waterborne pathogens are commonly responsible for outbreaks of gastroenteritis. *Giardia intestinalis* and *Cryptosporidium* spp. are common protozoan suspects, as well as Norovirus, a viral pathogen.[3,4]

While most waterborne illnesses are mild, some can result in hospitalisation and, rarely fatalities.[1] Although recognised as important public health issues, transmission dynamics remain poorly studied.[5]

Literature currently assumes that viral and protozoan pathogens differ in transmissibility and seasonality.[5] This study examines these assumptions to further characterise trends with the expectation that other factors are at play.

METHOD

TWO DATA SETS:

***HOSPITAL* CASES OF GASTROENTERITIS**

Stool samples positive for protozoan pathogens for patients in four Sydney-based hospitals from Jan 2007 – Dec 2010.[6]

- ***Seasonal trends for both Cryptosporidium spp. and G. intestinalis were analysed using Chi square test (Yates corrected).***

***HOUSEHOLD* CASES OF GASTROENTERITIS**

Cluster data from 600 households over a 15-month period prior to 2009, with stool samples collected during gastroenteritis episodes throughout the study.[7]

- ***Within household transmission dynamics determine using mean crowding based indices.[8]***

RESULTS

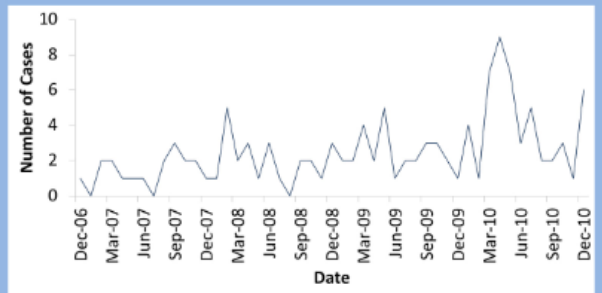

Figure 1: Monthly time series of *G. intestinalis* hospitalisations.

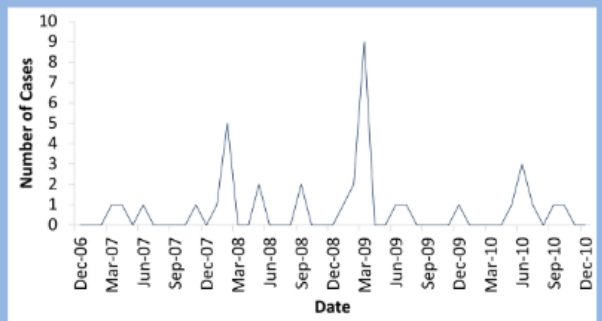

Figure 2: Monthly time series of *Cryptosporidium* spp. hospitalisations.

Pathogen	Pathogen Transmissibility ρ(∞)	Number of people across all households	Number of Households
Cryptosporidium	0.62	9	2
Giardia	0.73	14	3
Multiple Infections	0.61	44	9
Norovirus	0.63	125	26

Table 2: Analysis of household transmission for a variety of waterborne pathogens, using the mean crowding based indices.

MAJOR FINDINGS

- Contrary to previous research, seasonality was not equally important for all protozoan based pathogens.[9]
- *G. intestinalis* showed increased incidence but no seasonality (Figure 1), yet *Cryptosporidium* spp. showed significant Summer-Winter ratio trends (Figure 2).
- Protozoan, bacterial and viral pathogens did not differ with regards to within-household transmissibility (Table 2).

CONCLUSIONS

Findings of this study contradicted previous epidemiological and clinical observations.[4,9,10] Despite small sample sizes, the probability of results emerging by chance was very low (<0.05).

Different seasonal trends between protozoan pathogens indicated different transmission dynamics. As the life cycles of both protozoan pathogens are similar, this suggests further research into behavioural and environmental factors may better identify populations that are at imminent risk of infection.

Analysis of within-household data suggests that the number of secondary cases does not differ by type of pathogen. Quantitative microbial risk assessment protocols should be reevaluated based on within-household transmission results.

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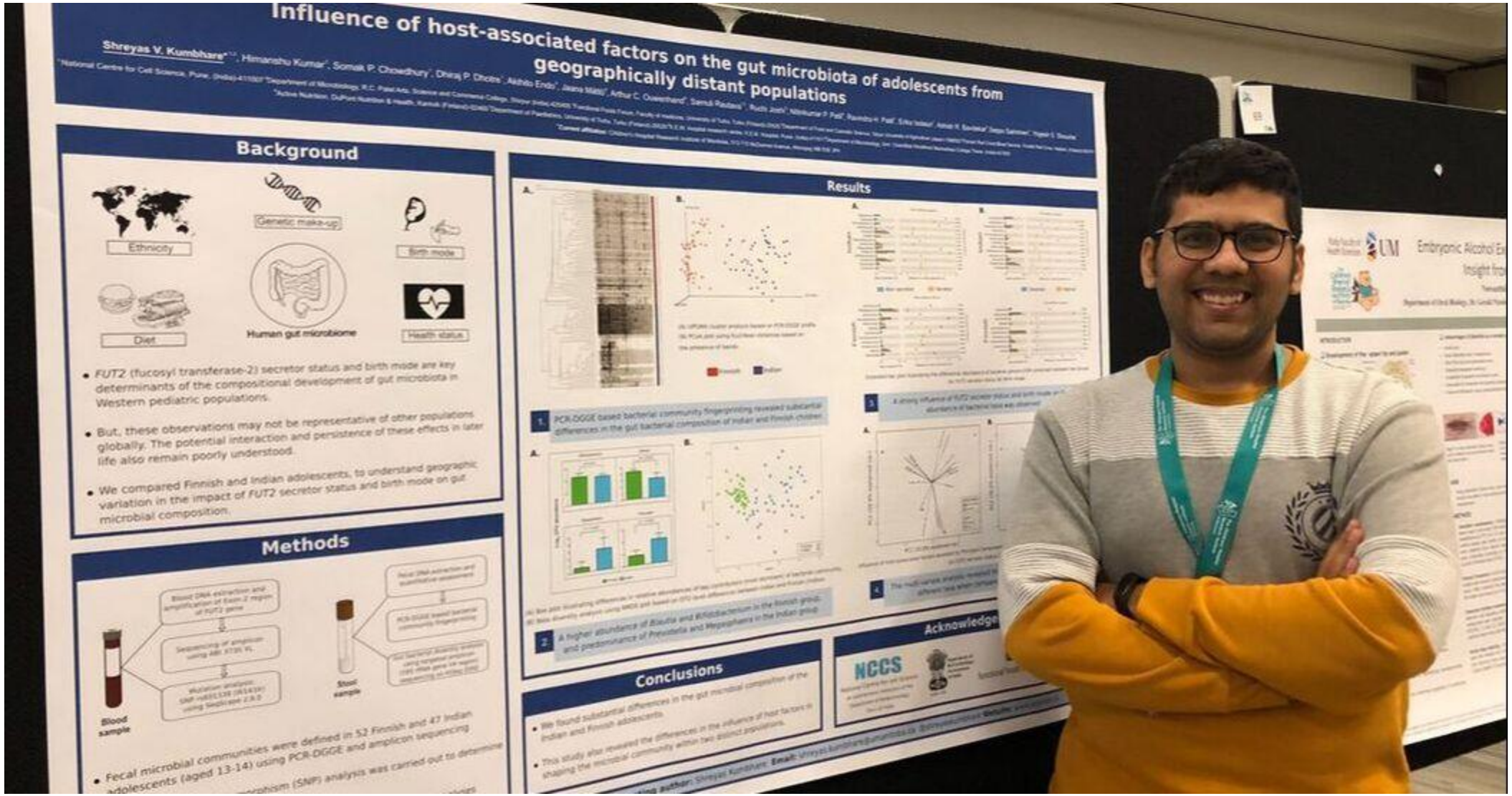

Influence of host-associated factors on the gut microbiota of adolescents from geographically distant populations
Shreyas V. Kumbhare, Himanshu Kumar, Somak P. Choudhury, Dhiraj P. Dhotre, Akihito Endo, Jaana Mattu, Arthur C. Ouwehand, Samuli Rautava, Ruchi Joshi, Nitinkumar P. Patil, Ravindra H. Patil, Sirka Isokuri, Aman K. Savitskaya, Deepa Sarmaya, Yogesh S. Shouche
Background
Ethnicity
Genetic make-up
Birth mode
Diet
Human gut microbiome
Health status
FUT2 (fucosyl transferase-2) secretor status and birth mode are key determinants of the compositional development of gut microbiota in Western pediatric populations.
But, these observations may not be representative of other populations globally. The potential interaction and persistence of these effects in later life also remain poorly understood.
We compared Finnish and Indian adolescents, to understand geographic variation in the impact of FUT2 secretor status and birth mode on gut microbial composition.
Methods
Blood sample
Stool sample
Fecal microbial communities were defined in 52 Finnish and 47 Indian adolescents (aged 13-14) using PCR-DGGE and amplicon sequencing
Results
1. PCR-DGGE based bacterial community fingerprinting revealed substantial differences in the gut bacterial composition of Indian and Finnish children
2. A higher abundance of Bioutia and Wilddiacterium in the Finnish group and predominance of Prevotella and Megasphaera in the Indian group
Conclusions
We found substantial differences in the gut microbial composition of the Indian and Finnish adolescents.
This study also revealed the differences in the influence of host factors in shaping the microbial community within two distinct populations.
Acknowledge
NCCS
Embryonic Alcohol Ex
Insight fro

Metformin inhibits epithelial-to-mesenchymal transition in an *in vitro* model of posterior capsule opacification

Jade Lasiste, Denise Miyamoto, Pablo Zoroquiain, Christina Mastromonaco, Sabrina Bergeron, Miguel N. Burnier, Jr.

MUHC McGill University Ocular Pathology Laboratory, McGill University, Montreal, QC, Canada

Introduction

- Posterior capsule opacification (PCO) is the most common complication of cataract surgery, causing a recurrence in visual decline in 3%-50% of patients up to [illegible] operatively
- PCO [illegible] to-mesenchymal trans[illegible] lens epithelial cel[illegible] and secrete e[illegible]
- [illegible] ration and [illegible] primarily [illegible] shown to
- [illegible] date the [illegible]hology. (2) gain [illegible]rmining [illegible]eceptor

Results

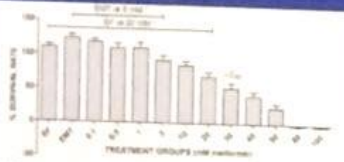


Figure 1. Metformin decreased HLE-B3 viability. The lethal concentration of metformin that reduced survival by half (LC_{50}) was 30 mM

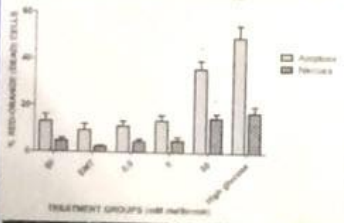


Figure 2. Metformin induced cell death by apoptosis. At 50 mM metformin, the [illegible]e dead cells (40%) had pyknotic or [illegible]nuclei (arrowhead in EMT, necrotic [illegible]e in 50 mM, apoptotic nucleus)

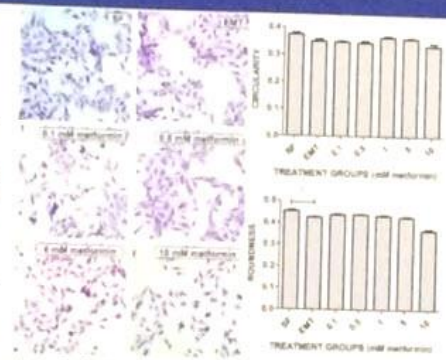


Figure 3. Metformin maintained LEC morphology. Circularity measures shape and roundness approximates symmetry. Both parameters are maintained with 1 mM metformin

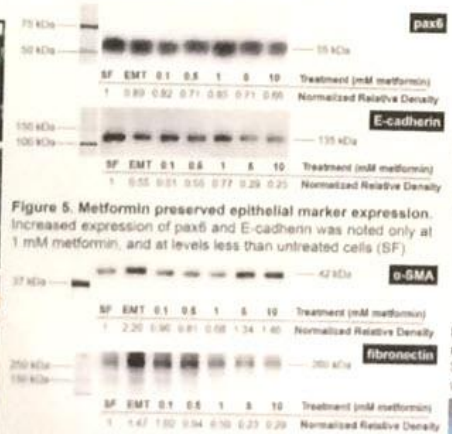


Figure 5. Metformin preserved epithelial marker expression. Increased expression of pax6 and E-cadherin was noted only at 1 mM metformin, and at levels less than untreated cells (SF)

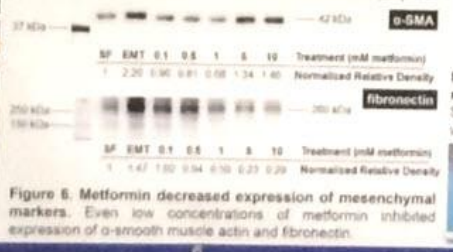


Figure 6. Metformin decreased expression of mesenchymal markers. Even low concentrations of metformin inhibited expression of α-smooth muscle actin and fibronectin.

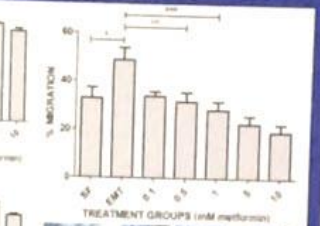


Figure 4. Metformin inhibited LEC migration. Migration was inhibited ($P<0.05$) at low concentrations

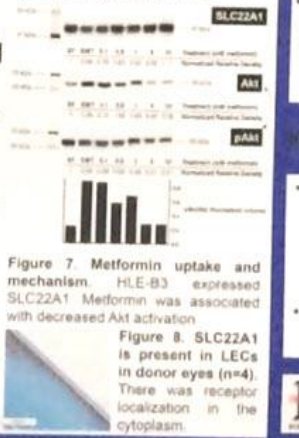


Figure 7. Metformin uptake and mechanism. HLE-B3 expressed SLC22A1. Metformin was associated with decreased Akt activation

Figure 8. SLC22A1 is present in LECs in donor eyes (n=4). There was receptor localization in the cytoplasm.

Discussion

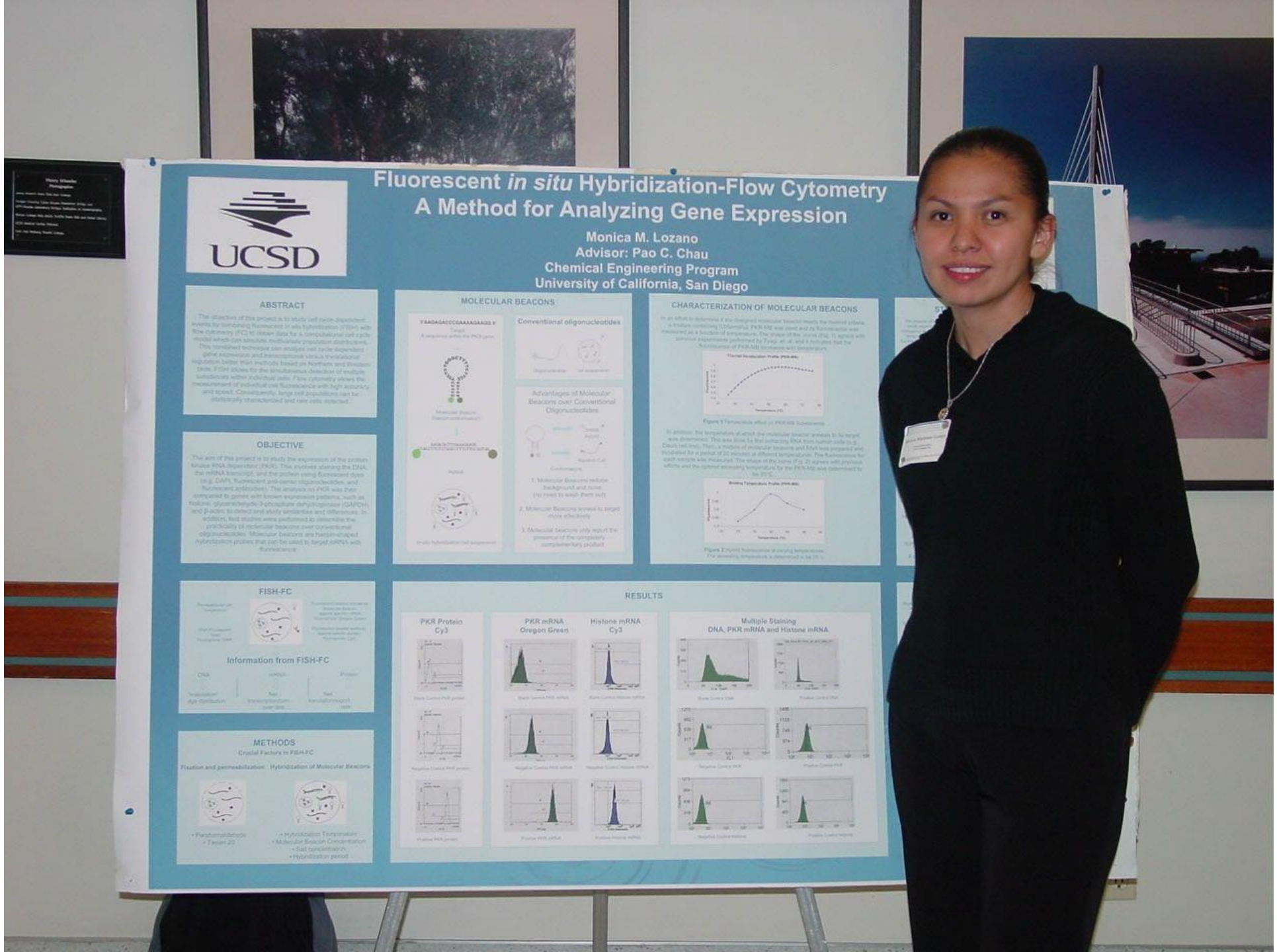
- This is the first study to: (1) demonstrate the direct effect of metformin on LECs; (2) analyze changes in LEC morphology via automated and qualitative parameters; (3) and establish the presence of the SLC22A1 receptor in the ocular lens epithelium
- The data show that metformin inhibits EMT in LECs, resulting in decreased viability and the induction of apoptosis; preservation of the LEC phenotype, as seen in maintained epithelial marker expression and cell morphology; and reduced mesenchymal marker expression and cell migration
- That the human ocular lens epithelium expresses SLC22A1 highlights the clinical significance of this study, as the receptor renders the lens capable of responding to metformin. The correlation between metformin use for other indications and PCO development can be studied in a prospective trial
- Since metformin inhibits EMT in LECs and EMT is the pathophysiology underlying PCO, it is logical to conclude that metformin may be effective against PCO. Its efficacy, as well as the doses, routes and timing of administration, should be validated *in vivo*
- Furthermore, metformin has an excellent safety profile, is inexpensive and readily available. A topical ophthalmic formulation of metformin exists and has been used in rabbits with no reported adverse effects on the cornea. In addition, its ocular pharmacokinetics in rabbits has been established

Conclusions

- Metformin inhibits EMT in LECs at concentrations ranging from 0.1 to 1 mM. This effect is most likely mediated through uptake via the SLC22A1 receptor and decreased Akt phosphorylation. The human ocular lens epithelium expresses SLC22A1 and thus may respond to metformin
- Metformin is safe, effective and accessible, making it a suitable potential pharmacologic adjunct in PCO prevention strategies

BIOPSY

Cancer Research Program


Fluorescent *in situ* Hybridization-Flow Cytometry
A Method for Analyzing Gene Expression
Monica M. Lozano
Advisor: Pao C. Chau
Chemical Engineering Program
University of California, San Diego
UCSD
ABSTRACT
OBJECTIVE
MOLECULAR BEACONS
Conventional oligonucleotides
Advantages of Molecular Beacons over Conventional Oligonucleotides
CHARACTERIZATION OF MOLECULAR BEACONS
FISH-FC
Information from FISH-FC
METHODS
Crucial Factors in FISH-FC
RESULTS
PKR Protein Cy3
PKR mRNA Oregon Green
Histone mRNA Cy3
Multiple Staining
DNA, PKR mRNA and Histone mRNA

UNIVERSITY of GUELPH

search Team[4], & Sherilee Harper[1,4]

Team; [4]McGill University, Montreal, Quebec, Canada

Discussion & Next Steps

lain sources of drinking water changed significantly ver time, yet secondary water sources remained onsistent. Although originating from the same surface ater source (a local lake), ratings of ADWS water were ore frequently rated as "good" or "very good" than tap ater; further analysis is required to understand these erceptions, and the degree to which aesthetic appeal nd perceptions of safety influence choice of drinking water.

ext steps include linking the surveys by individual ID to ssess individual changes and patterns of drinking water onsumption over time. Multivariable regression models ill be used to identify potential factors contributing to aily volume of water consumption and use of various ater sources.

cknowledgements

cere thanks to the people of Rigolet, RICG d the dedicated work of local surveyors cluding Charlie Flowers, Marilyn Baikie, nded by the IK-ADAPT and Indigenous He jects; see www.ihacc.ca to learn more ab

IK adapt

oster Presenters

Participatory methods in Rigolet: Evaluation of Inuit health programs and collaborative development of a whiteboard video for health promotion

Manpreet Saini[1], Inez Shiwak[2], Steven Roche[1], Andrew Papadopoulos[1], Michele Wood[3], Rigolet Inuit Community Government[2], Nunatsiavut Government[3], IHACC Research Team[4] and Sherilee Harper[1, 4]

[1]University of Guelph, Guelph, Ontario, Canada; [2]Rigolet Inuit Community Government, Rigolet, Nunatsiavut, Labrador, Canada; [3]Nunatsiavut Government, Happy Valley- Goose Bay, Nunatsiavut, Labrador, Canada; [4]Indigenous Health Adaptation to Climate Change Research Team

Background

Indigenous populations face great health disparities within all countries which can be attributed to differences in social, cultural, political and economic factors[1,4]. Public health interventions that are culturally and locally relevant often lead to greater success than ones that are not[5,9]. Inuit culture is heavily oral and visual, and this is important for effective programs and interventions[8]. Using both these cultural aspects and community participation can generate culturally relevant interventions and tools such as digital storytelling or whiteboard animation videos[2,3,7].

Community: Rigolet, Nunatsiavut

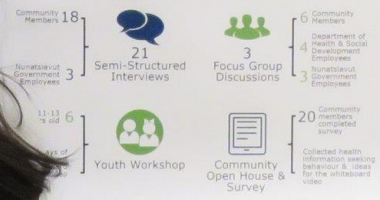
Rigolet is a small, remote community located in Nunatsiavut, Labrador. It has a population of about 305 people and 85% of the population identify as Inuit[10]. Incidence rates of acute gastrointestinal illness (AGI) in Rigolet are some of the highest reported in the global literature[6].

Research Objectives

I. Co-develop a whiteboard video with Inuit youth and community members to share public health information
II. Co-develop an evaluation framework for Inuit health programs using participatory methods
III. Assess the development and use of the video using the evaluation framework

Methods

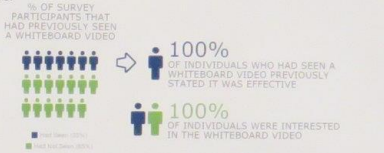
This project involves qualitative research and participatory methods to (i) explore perspectives on community participation in public health program evaluation and (ii) receive feedback and input on the whiteboard video about AGI.



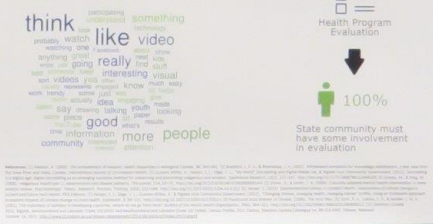
Youth developing the character and storyboard for the video. Photo Credit: Inez Shiwak

Preliminary Results

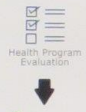
Based on the surveys, whiteboard videos were considered interesting & effective.



Interview and focus group participants expressed positive responses (e.g. "like", "interesting", "good") to the whiteboard video. Larger text indicates word was used more often.



Interview and focus group response to community participation in evaluation:



Discussion & Implications

Preliminary results indicate the whiteboard video is an interesting and potentially useful medium to share health information. The whiteboard video has been found useful in disseminating research results when developed with community participation[2]. Evaluation of the video, once it is produced, will indicate (i) its effectiveness in sharing health information and (ii) key factors that make it effective or ineffective. Discussion with community members and government employees has indicated evaluation and the ability for community members to provide feedback on health programs is essential. Continued analysis of the data will provide insight into the extent of community participation in the evaluation framework.

Overall, the whiteboard video evaluation can inform the use of community focused public health interventions and the use of novel tools to share public health information. Additionally, it can demonstrate the potential use of whiteboard videos in other Northern Inuit communities to address health disparities. The evaluation framework could help governments demonstrate impact of these interventions and refine future policy and practice initiatives.

Next Steps

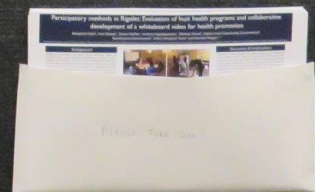
Develop participatory evaluation plan

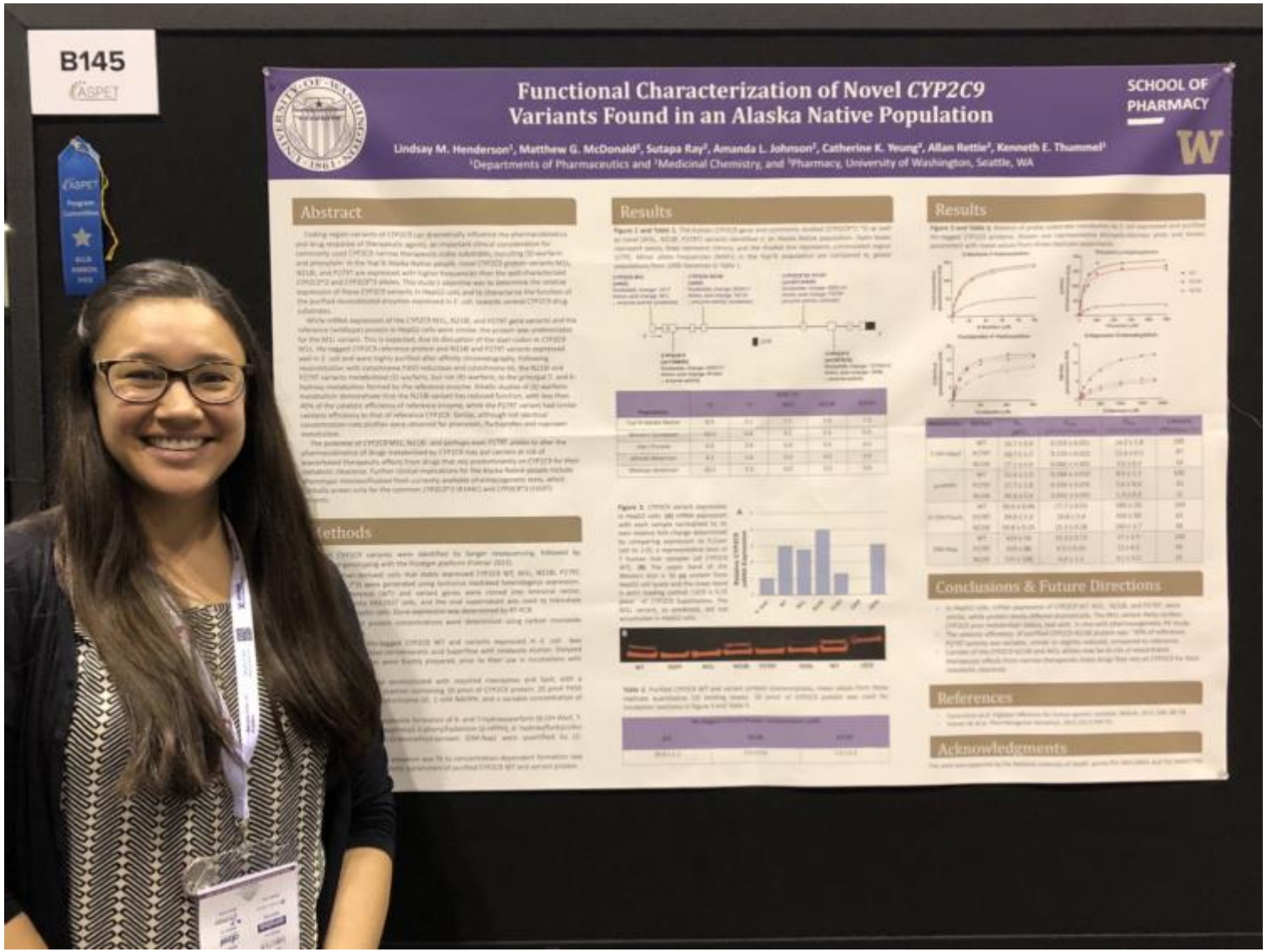
Present the video to the community

Evaluation of the video and its development process

Acknowledgements

Special thanks to the community of Rigolet, the youth in Rigolet: Rodney, Alison, Mackenzie, Brittney, Rian and Brady, the Rigolet Inuit Community Government, and the Nunatsiavut Government for their support and without whom this project would not be possible. Thanks to Rita King for her assistance in hosting community events and collecting data. And lastly, thanks to the funders: the Nasivvik Centre for Inuit Health and Changing Environments, IDRC, CIHR, SSHRC, NSERC and the Indigenous Health Adaptation to Climate Change and Arthur B. Liesemer.




B145
ASPET
Functional Characterization of Novel CYP2C9 Variants Found in an Alaska Native Population
SCHOOL OF PHARMACY
Lindsay M. Henderson[1], Matthew G. McDonald[1], Sutapa Ray[2], Amanda L. Johnson[2], Catherine K. Yeung[2], Allan Rettie[2], Kenneth E. Thummel[1]
[1]Departments of Pharmaceutics and [2]Medicinal Chemistry, and [3]Pharmacy, University of Washington, Seattle, WA
Abstract
Results
Results
Conclusions & Future Directions
References
Acknowledgements

Making data sharing the new normal: progress and challenges

SPRINGER NATURE

Grace Baynes[1], Iain Hrynaszkiewicz[2], Mithu Lucraft[3],
[1]Springer Nature, g.baynes@nature.com [2]Springer Nature, iain.hynaszkiewicz@nature.com, [3]Springer Nature, mithu.lucraft@springernature.com

Abstract:
The case for open data to support good research practice is increasingly inarguable. Open access to research data can help speed the pace of discovery and deliver more value by enabling reuse and reducing duplication. Good data practice also makes research more efficient, effective and fulfilling for researchers. A survey conducted in 2017 by Springer Nature with more than 7,000 researchers found that, despite the known benefits, there is still a significant proportion of data that is not being shared. The survey explored some of the main challenges for researchers in data sharing, including how data is organised; knowledge of copyright and licensing; knowledge about repositories; time; and costs. This poster will summarize the findings of this survey, and our considered views on increasing data sharing amongst researchers.

Related:
Full survey dataset (CC-BY 4.0): https://doi.org/10.6084/m9.figshare.5971387; Whitepaper based on the results of this survey (CC-BY 4.0): https://doi.org/10.6084/m9.figshare.5975011

Survey respondents

Breakdown by subject and region:

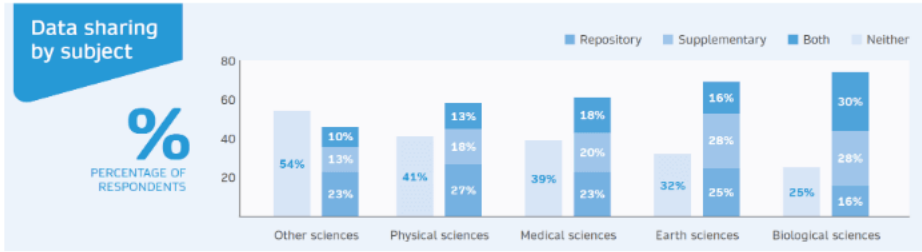
Main challenge to data sharing is **organising data in a presentable and useful way**

Almost half of all respondents (46%) said that **organising data** was a challenge, followed by **confusion around copyright** (37%) and **not knowing where to share data** (33%)

Small datasets are the **least likely to be shared**

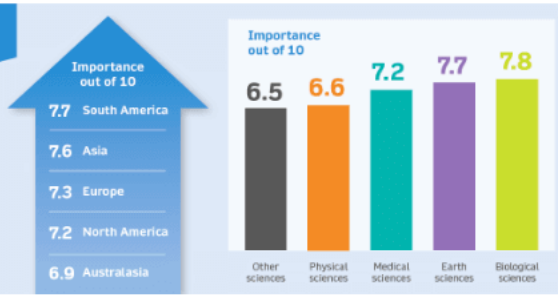
Researchers that generated the smallest sized data files (<20MB; n = 2,036) had the **highest proportion of data** that were neither shared as supplementary information nor deposited in a repository **(42%)**

Data sharing by subject



Importance of data discoverability

76%
of respondents highly rate the importance of their data being discoverable: **most popular ranking was 10/10**



Majority of researchers share their data in some way

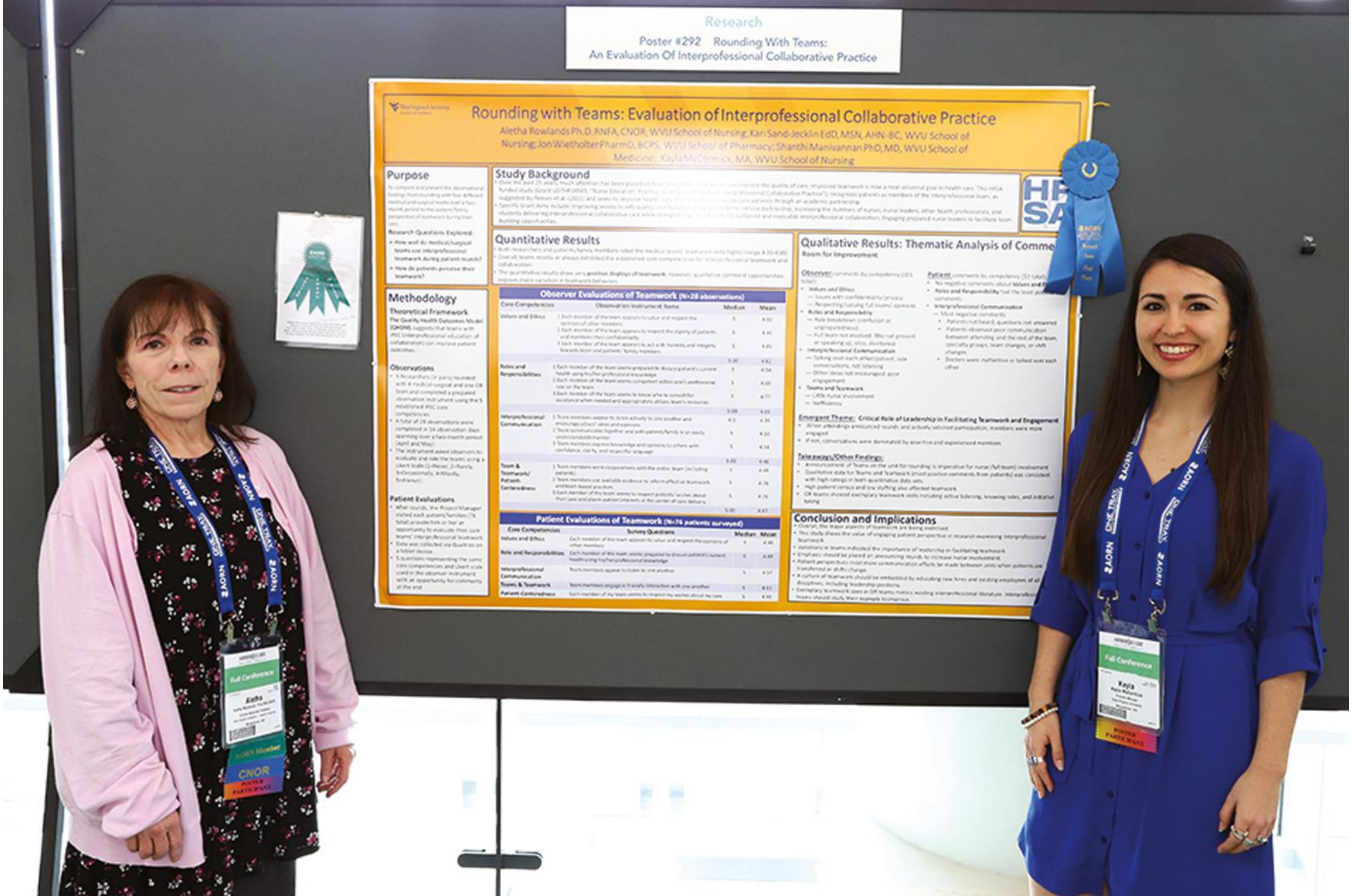
63% of respondents stated that they generally **submitted data files** as **supplementary information,** deposited the files in a **repository,** or both

What can be done to increase data sharing?

Improving **education and support** on good data management, particularly at early stages of researchers' careers

Creating **faster, easier routes for sharing data** - making data easily accessible and usable by researchers

SPRINGER NATURE


Research
Poster #292 Rounding With Teams:
An Evaluation Of Interprofessional Collaborative Practice
Rounding with Teams: Evaluation of Interprofessional Collaborative Practice
Aletha Rowlands Ph.D. RNFA, CNOR, WVU School of Nursing; Kari Sand-Jecklin EdD, MSN, AHN-BC, WVU School of Nursing; Jon Wietholter PharmD, BCPS, WVU School of Pharmacy; Shanthi Manivannan PhD, MD, WVU School of Medicine; Kayla McCormick, MA, WVU School of Nursing
Purpose
Study Background
Quantitative Results
Qualitative Results: Thematic Analysis of Comme
Room for Improvement
Methodology
Theoretical Framework
Observations
Patient Evaluations
Observer Evaluations of Teamwork (N=28 observations)
Core Competencies
Observation Instrument Items
Median
Mean
Values and Ethics
Roles and Responsibilities
Interprofessional Communication
Team & Teamwork/ Patient-Centeredness
Patient Evaluations of Teamwork (N=76 patients surveyed)
Core Competencies
Survey Questions
Median
Mean
Values and Ethics
Roles and Responsibilities
Interprofessional Communication
Teams & Teamwork
Patient-Centeredness
Emergent Theme: Critical Role of Leadership in Facilitating Teamwork and Engagement
Takeaways/Other Findings:
Conclusion and Implications
Full Conference
AORN Member
CNOR
POSTER PARTICIPANT
Kayla
POSTER PARTICIPANT

Research

Poster #287 Operating Room Utilization Variability Across Weekdays

Operating Room Utilization Variability Across Weekdays

Cheryl Elliott-Dawe, MA, MSN, RN, CNOR

Jonas Scholar | Cohort V 2016-2018

College of Nursing, Augusta University, Augusta, Georgia

INTRODUCTION

identification and control of variability can aid perioperative leaders in effectively managing the operating room (OR).[1]

the one hand, scheduling complicated cases early in the week can even the chance of patients being in the hospital over the weekend and can reduce the need for weekend rounds, but this practice can also in stress on the system early in the week.[1,2]

research shows that the day of the week surgery occurs has an on patient outcomes and cost.[1,2,3,4] few studies have examined the of weekday on OR utilization.

purposes of this study were to examine the differences in OR utilization across weekdays and to delineate the sources of variability.

Research Questions

- How does OR utilization differ across weekdays?
- What are the sources of variability in OR utilization across weekdays?

Hypothesis

Differences in OR utilization across days of the week can be accounted for by changes in late starts, delays, and idle time.

Figure 1. Conceptual Framework

METHODS

- The investigation was part of a larger study on OR utilization that was approved by the IRB and was deemed non-human subject research.
- An initial power analysis indicated that a sample size of 216 daily measurements of each condition would be sufficient to detect effect sizes.
- Fifty five months of data were extracted from an academic medical center surgical data repository located in the southeast region of the United States.
- Performance metrics of late start, idle time, delay, and OR utilization were calculated for each day of the week, Monday through Friday.
- ANOVA was used to compare OR metrics across weekdays. All statistical tests were conducted using the 0.05 level of significance.

RESULTS

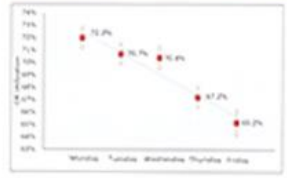


Figure 2. Impact of Day of the Week on OR Utilization

Notes: OR Utilization differed across days of the week ($F = 29.72$, $p < 0.0001$). Each day of the week represents a significant decrease in OR utilization except Wednesdays which did not differ from Tuesdays. Bars represent the 95% confidence interval.

Figure 3. Percent of Available OR Staffed Minutes Lost due to Late Start

Notes: The percent of available minutes lost due to late start differed across days of the week ($F = 2.38$, $p = 0.05$). Late start on Mondays was significantly lower than other days of the week. Tuesdays through Fridays were not significantly different from one another. Bars represent the 95% confidence interval.

Figure 4. Percent of Available OR Staffed Minutes Lost due to Delay

Notes: The percent of available minutes lost due to delay differed across days of the week ($F = 5.04$, $p < 0.0001$). Delays on Mondays and Tuesdays were significantly less than delays on Wednesdays, Thursdays, and Fridays. Bars represent the 95% confidence interval.

Figure 5. Percent of Available OR Staffed Minutes Lost due to Idle Time

Notes: The percent of available minutes lost due to idle time differed across days of the week ($F = 24.43$, $p < 0.0001$). Mondays, Tuesdays, and Wednesdays were not different from one another. Thursdays had significantly more idle time than earlier days of the week, and Fridays had significantly more idle time than Thursdays. Bars represent the 95% confidence interval.

ACKNOWLEDGEMENTS

The author wishes to thank Dr. Julie Zadinsky and Dr. Jie Chen for their guidance and advice along with Ms. Chelsey Lemons for assistance with formatting this poster.

DISCUSSION

- There was a significant decline in OR utilization over the course of the week. Relative to a high performing OR with 85% utilization, the average costs associated with unused OR staffed minutes in this study ranged from $57,275 for each Monday to $33,768 for each Friday.
- The source of the variability in OR utilization was attributed to significant effects of three performance metrics across weekdays.
- Late starts on Tuesday through Friday were significantly longer than those that occurred on Mondays.
- Delays on Wednesday through Friday were significantly longer than those that occurred on Mondays and Tuesdays.
- Finally, idle times for Thursdays were significantly longer than those recorded Monday through Wednesday, and idle times on Fridays were significantly longer than those found on Thursdays.

IMPLICATIONS & CONCLUSIONS

- Declines in OR utilization across weekdays are due, in part, to compounding significant shifts in late start, delay, and idle times as the week progresses.
- These findings suggest that the examination and careful consideration of the timing of shifts in OR performance metrics can, in part, account for OR utilization variability across weekdays.
- Identifying the sources of OR utilization variability can assist managers developing appropriate strategies that enhance outcomes for patients, minimize costs, and maximize revenue for the organization.

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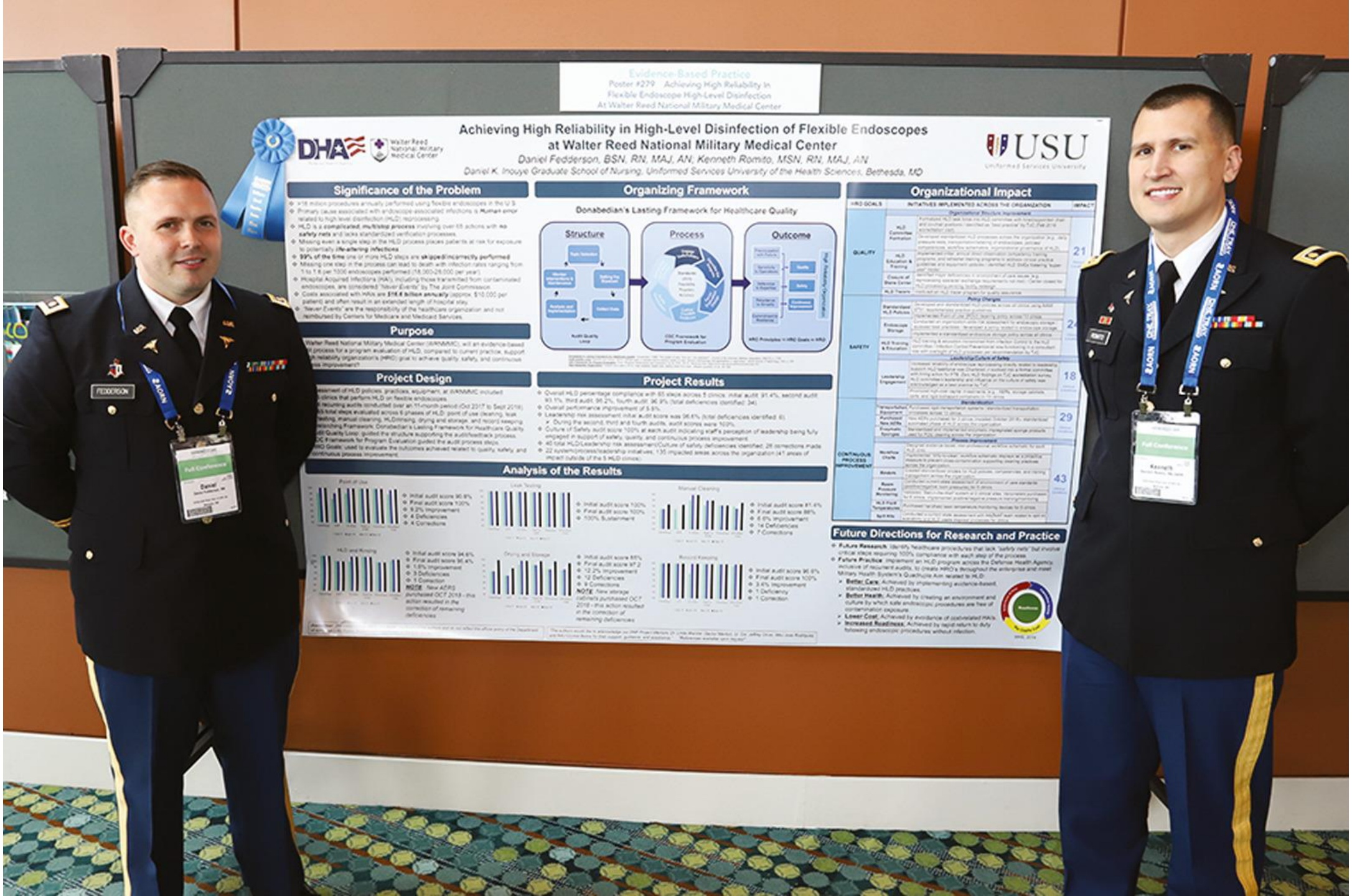
Evidence-Based Practice
Poster #279 Achieving High Reliability in Flexible Endoscope High-Level Disinfection At Walter Reed National Military Medical Center
DHA
Walter Reed National Military Medical Center
Achieving High Reliability in High-Level Disinfection of Flexible Endoscopes at Walter Reed National Military Medical Center
Daniel Fedderson, BSN, RN, MAJ, AN; Kenneth Romito, MSN, RN, MAJ, AN
Daniel K. Inouye Graduate School of Nursing, Uniformed Services University of the Health Sciences, Bethesda, MD
USU
Uniformed Services University
Significance of the Problem
Organizing Framework
Donabedian's Lasting Framework for Healthcare Quality
Structure
Process
Outcome
Organizational Impact
Purpose
Project Design
Project Results
Analysis of the Results
Future Directions for Research and Practice

Design/Concept

Poster #331 Finding Harmony: Improving Stress Management For Staff

EISENHOWER HEALTH

Cultivating Positive Change: Improving Stress Management for Staff in Surgical Services

Cera Salamone BSN, RN, PHN, CNOR, NE-BC, OCN, HACP

Clinical Issue

The team noted that a common complaint of staff in the department was stress and feeling overwhelmed by conflict. Stress can cause feelings of exhaustion, increase personal illness, decrease quality of sleep, and impair judgement.

Description of Team

The team was led by the Perioperative 101 administrator and consisted of a group of Perioperative 101 interns, other preoperative, postoperative, and intraoperative staff, service line leadership, and materials management staff.

Objectives

- Reduce stress in the surgical services department
- Educate staff on methods for stress reduction such as:
  - Wellness
  - Guided Imagery
  - Humor
- Provide insight and understanding about self and coworker communication styles through personality type analysis

Preparation and Planning

- A review of the literature revealed that stress in a surgery workplace increases incidents of medication errors, wrong site surgeries, and retained surgical items.
- The group wanted to work on a project to improve the stress management, conflict resolution skills, and resources for the staff in Surgical Services.

Assessment

Staff Survey Question	Initial Survey
Overwhelmed with conflict in the workplace	55%
Has base knowledge of healthy ways to manage stress	68%
Open to new methods for stress management	96%
Feels comfortable with communication skills when resolving conflict	77%
Feels stress affects overall performance at work	66%
Feels rested and ready to start the day	41%

Implementation

The team developed a multifactorial approach including education on existing resources, providing new resources, training on conflict resolution, and crucial conversation skills.

Education topics included:

- Crucial conversations and conflict management
- Personality assessment testing with education on stressors, communication styles, and stress relieving methods based on personality types
- Relaxation techniques
- Stress management and mental health resources offered by the organization

The team also provided a safe place within the department for staff to access on their breaks to decompress. A low budget relaxation station was created with a sound machine, aromatherapy, low lighting, and massage chairs.

Results

Survey assessments of stress levels, knowledge of stress reduction techniques, and comfort levels with crucial conversations and conflict resolution were collected pre and post education and relaxation station implementation.

Staff Survey Question	Post Implementation Survey Results
Overwhelmed with conflict in the workplace	33%
Uses of new methods for stress management	81%
Uses of relaxation station	69%
Finds interventions helpful for reducing stress	78%
Feels comfortable with communication skills when resolving conflict	75%
Feels stress affects overall performance at work	75%
Feels rested and ready to start the day	69%

Staff was also surveyed on their self-rated stress levels prior to using the relaxation station and post use of the relaxation station. On a scale of 1 (not stressed) to 5 (very stressed), survey results showed an average decrease of stress levels by 59% after 10 minutes in the relaxation station.

Implications for Nursing

Proactive management of stress in conjunction with self awareness and improved communication techniques with team members can improve the working environment for perioperative staff, which improves patient safety and patient outcomes.

References

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Design/Concept

Poster #343 Development And Implemenation Of Active Shooter Plan

Development and Implementation of Active Shooter Plan

Bryan Mehalick, RN, BS St. Luke's University Health Network, Bethlehem, PA

Background

- Due to the prevalence of active shooter situations in the United States, emergency preparedness is essential.
- Healthcare facilities must have plans in place to meet the challenge of an active shooter situation.
- Preparing for an active shooter should follow the same rigorous training as other life threatening events such as fires or weather emergencies.

Aim

- Increase staff member awareness and preparedness for an active shooter situation within the OR environment as well as resolve misconceptions on staff members' roles during such an event.

Methods

- If Floors member committee examined the department for security weakness as well as areas of refuge.
- Staff interviews were conducted to determine the extent of their knowledge regarding their role in an active shooter situation.
- Concurrently, an extensive literature search was performed, seeking to find any information related to active shooter situations where vulnerable patients are involved, such as the OR or ICU.
- A guideline was developed that utilized the Run, Hide, Fight protocol set forth by numerous Federal Agencies (FEMA, FBI).
- The committee tediously reviewed the guideline prior to delivering the information to the staff.
- An Active Shooter Drill was performed in conjunction with ASC, PACU, anesthesia providers and physicians.
- Drill participants were debriefed at the conclusion of the exercise and given a survey to reflect their thoughts as well as provide suggestions.

Active Shooter Drill Action Plan

- Notifications of the drill were given to local law enforcement, hospital administration and bystanders.
- The exercise environment was cleared and maintained with signs displaying an active shooter drill was in progress.
- All participants were required to sign in and wear a badge indicating that they were participating in the drill.
- Participants were assembled outside of the OR and briefed on the drill procedure.
- Participants were allowed access to the OR and instructed to gather in groups in various ORs to simulate a normal work day.
- An actor, playing the role of the active shooter and using a blank gun, moved throughout the OR firing the replica weapon.
- Participants were encouraged to follow the Run, Hide, Fight protocol which utilized already established fire exits and newly created Areas of Refuge or "safe rooms".
- Once participants left the exercise area they were not permitted to return until the drill was completed.
- The drill was concluded after ten minutes and the participants assembled in a predetermined area for debriefing.

Marker above door designating the room as an Area of Refuge

Drill Participants preparing for the drill to commence

Acknowledgment

- *Active Shooter Preparedness Committee:* Anita Bunn RN, MSN, CNOR; Karen Hayek RN, Anne Hess RN, Author Leighton RN, Victoria Marks RN BSN, Bryan Mehalick RN, BS, Barbara Pazzella RN, MSN, CNOR, Stella Quinones, Eric Rivera CST, Caroline Rodriguez RN, Lisa Sabo CST, Colleen Snyder RN, BSN, Lauren Stellhamer RN, Tammy Stone RN, BSN, CNOR, Beth Wolus RN, BS

Survey Results

- Positive feedback provided from staff members in regards to the necessity of exercise and the information provided.
- 90% response rate to staff survey.
- Staff state an improved recognition of their role in an active shooter situation and how to properly respond.

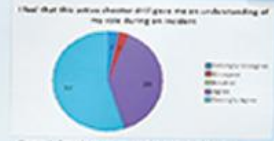


Figure 1. Sample question used in post-drill briefing

Future Plans

- Areas for improvement were identified and promptly followed up:
  - Staff needed additional education on proper usage of room intercoms.
  - Physicians were not familiar with escape routes.
- Active Shooter situation to be scaled down and drilled annually to refresh staff on Run, Hide, Fight protocol and areas of refuge.

Conclusions

- A multidisciplinary team created a plan that has brought an increased awareness to the staff as well as promoted conversation on the need for preparedness.

St Luke's UNIVERSITY HEALTH NETWORK

ВНИМАНИЕ!

Graphic design ≠ User Experience Design

the FEBS Journal
EDITOR'S CHOICE

Rethinking poster presentations at large-scale scientific meetings – is it time for the format to evolve?

Nicholas Rowe[1] and Dragan Ilic[2]

1 Faculty of Education, University of Lapland, Rovaniemi, Finland

2 Department of Epidemiology & Preventive Medicine, School of Public Health & Preventive Medicine, Monash University, Melbourne, Australia

Introduction

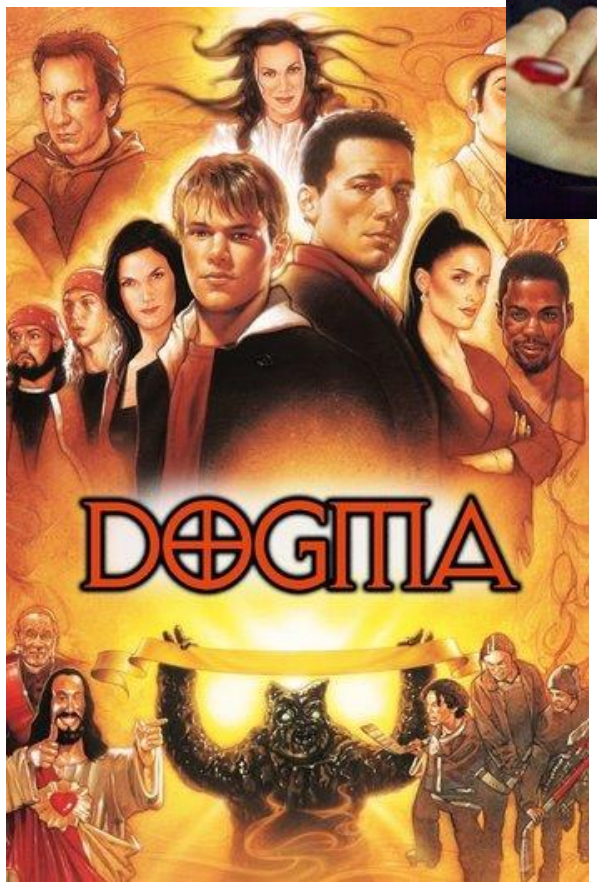
Conferences have been recorded since the mid-1600s [1], and form a key professional practice in scientific and other academic/professional domains. Conference events range in scale from small local affairs to vast international gatherings, but their underlying objectives are the same: to allow like-minded people to gather and exchange knowledge and views, and to promote networking within the field. The motivations for attending conferences are both intrinsic and extrinsic. As individuals, we like to learn more about our fields of study, meet our peers, and also revitalize ourselves away from our daily routines. Additionally, as a presenter, you may formally contribute your knowledge to the community, which has both altruistic and personal motivations. As individuals, the benefits of con-

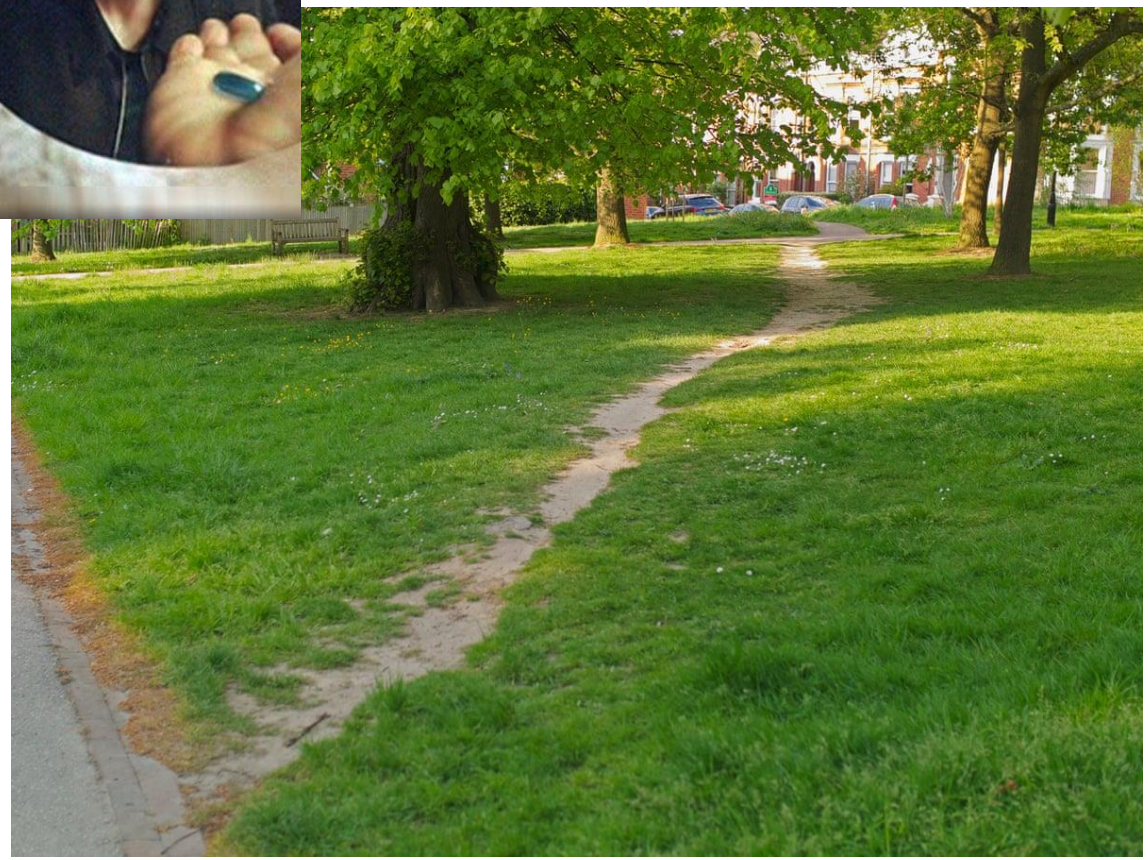
As an example of the growth of poster presentation and its accommodation, the 1969 FEBS meeting [6] was the first recorded example of an international scientific poster-type display session. It hosted 105 posters over 4 days, with 12 h dedicated to the sessions (averaging 1.5 h per display period and 13 posters on display per session). In contrast, the 2014 FEBS/EMBO conference [7] hosted 2098 posters over 4 days, but only 6 h were dedicated to the sessions. Whilst the latter meeting also allocated 1.5 h per scheduled display period, an average of 525 posters were on display at each session – more than 40 times the number presented in 1969 (Fig. 1).

On the surface, this appears to be a positive indication that members of the scientific community are

Gleamed wisdom

- Perspectives: presenter/attendee
- Theories of consumption
- Information foraging theory, cognitive load, working memory
- Interaction cost
- Click bait





https://www.youtube.com/watch?v=agtgnJP3KoQ

https://www.youtube.com/watch?v=SYk29tnxASs

betterposter-template-landscape.pptx (Version: 43)

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#betterposter

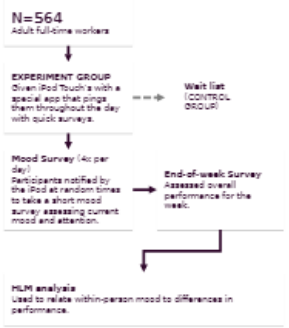
Page: 4 of 32 Automatic Zoom

PRESENTER
Lem Hewitt

Background

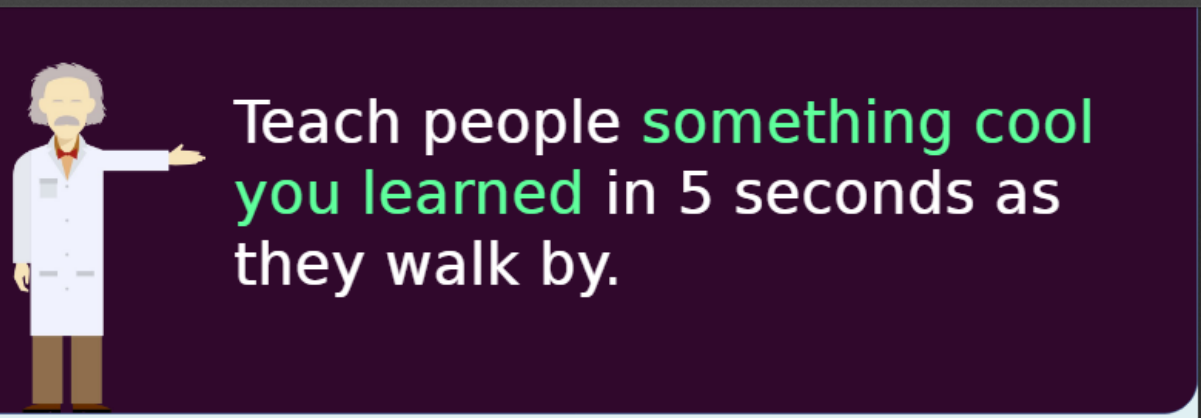
Who cares? Explain why your study matters in the fastest, most brutal way possible (feel free to add graphics!).

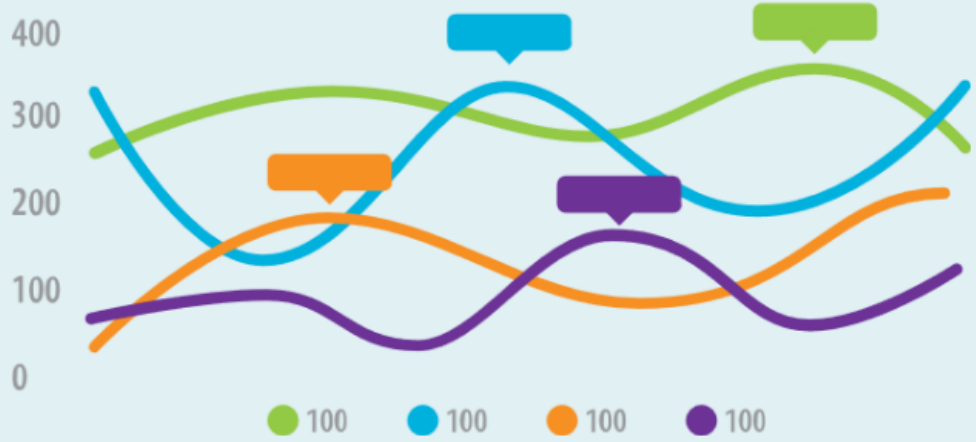
Methods



Extra results

Assume they already read your punchline, and now include a little extra detail.



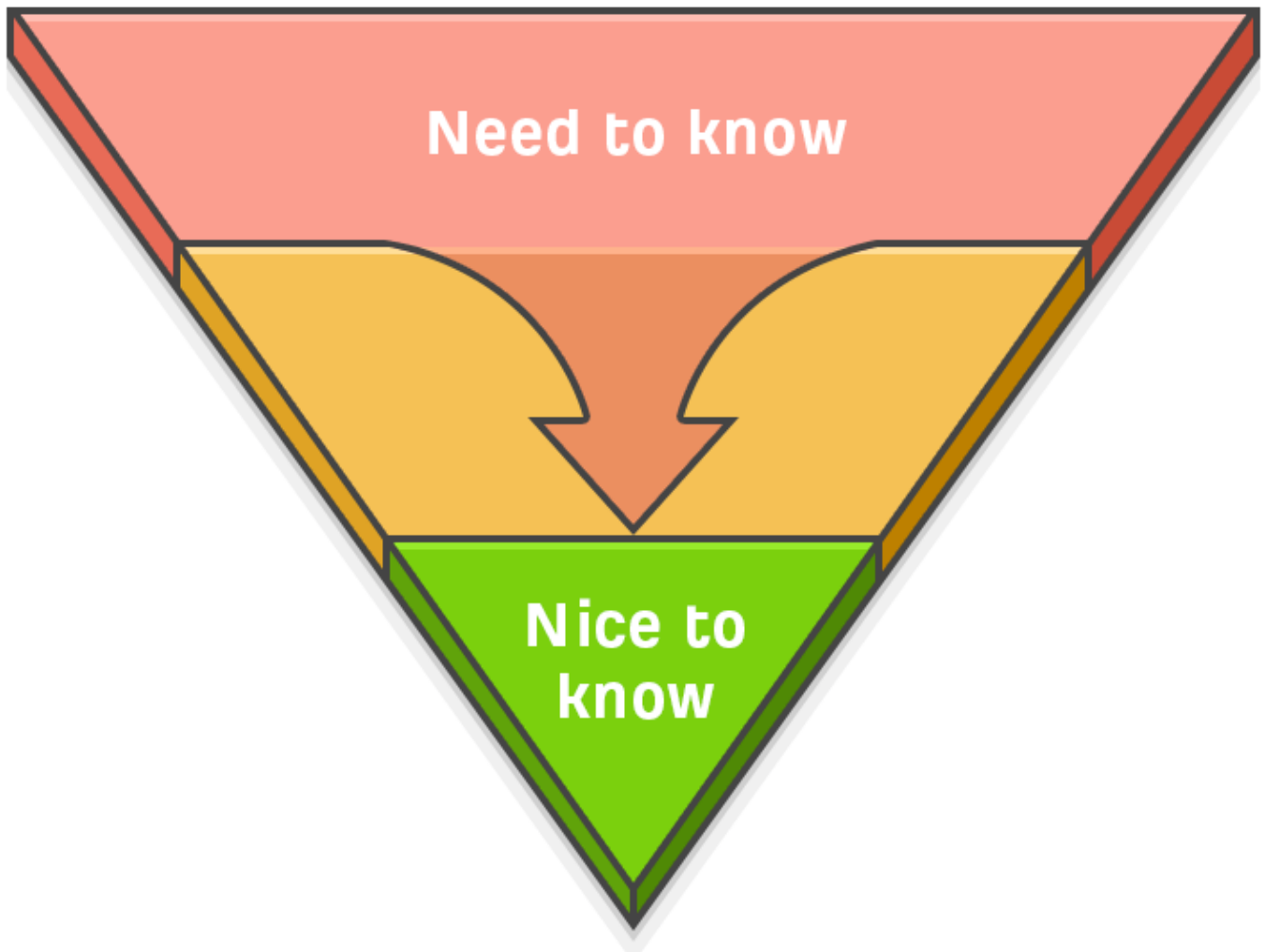


LEM HEWITT, Phillip Merman, Ted crisp,

“Perfection is not when you have nothing to add.

Its when you have nothing to take away.”

The Inverted Pyramid Method



Non-Cognitive Predictors of Student Success:
A Predictive Validity Comparison Between Domestic and International Students

Jacob Smith, Dr. Thea Schofield, Dr. Antonio Ibarra, Ianis Choi, Benn Mullins, Dr. Emily Williams
Michigan State University

Abstract

Given increasing interest in utilizing non-cognitive predictors in the college admissions process and rising enrollment of international students, research is warranted to compare the predictive validity of these measures across domestic and international students. Results indicate some predictive validity differences do exist, and an explanation for this differential validity, as well as a moderator of these relationships, are tested.

Background

- Though cognitive predictors of student success (e.g. ACT, HSGPA) remain popular, there is increasing interest in non-cognitive predictors of student success (e.g. situational judgement, adaptability), and these have been found to predict student performance (Oswald et al., 2004; Keeney et al., 2009).
- From 05/06 to 15/16 academic year, the number of international students studying in U.S. increased yearly. In 2016, 5.2% of students international with over 1 million enrolled (Institute of International Education, 2016).
- Previous work by Prasad and colleagues (2016) found mean differences in non-cognitive measures across Chinese and Caucasian American students, along with differential validity for a Perseverance non-cognitive measure.
- The current research is an extension of Prasad et al., 2016, exploring differential validity in two large samples of students, testing an explanation for these differences in validity, and testing a possible moderator of these relationships between non-cognitive predictors and GPA.

Research Question & Hypotheses

Research Question 1: Will non-cognitive measures display differential validity between domestic and international students?

- Non-cognitive measures may be functioning as a proxy for English ability.

H1: Differential validity will be accounted for by English proficiency.

- Non-cognitive predictors may be more important for individuals from a more culturally distant country, as adjustment may be more difficult necessitating greater non-cognitive abilities.

H2: Non-cognitive measures will exhibit greater validity for international students from more culturally distant countries.

Method

Samples

Sample 1: 7702 students at large, Midwestern university
- 54.1% (4163) female
- 11.2% (859) international (8.2% Chinese)

Sample 2: 7683 students at large, Midwestern university
- 52.8% (4060) female
- 13.7% international (10.4% Chinese)

Method (cont.)

Measures:

Biographical Data – Standardized inventory of an individual's experiences, attitudes, and behavioral tendencies relevant to college student experience and performance.
- Consists of seven scales: Knowledge, Leadership, Social Responsibility, Adaptability, Perseverance, Continuous Learning, Academic Ethics.

Situational Judgement Test (SJT) – Presents typical situations college students would face and possible responses to situation, utilized to measure individuals ability to judge and react appropriately.

GPA – 1st semester cumulative GPA on 0.0 to 4.0 scale.

TOEFL – Standardized test to measure "ability to use and understand English at a university level" (ETS.org).

International Status – Dichotomous variable representing international status of student (Sample 1 – Based on residence code, Sample 2 – Based on residence country).

Cultural Distance – Euclidian distance between individual's residence country and United States, based on nine GLOBE cultural dimensions (House et al., 2004).

Perceived Cultural Distance – 12-item scale measuring perceptions regarding cultural differences between U.S. and home country on variety of aspects (e.g. values and beliefs, family life) (Demes & Geeraert, 2014)

Results

- Correlations between non-cognitive predictor scores and 1st semester GPA (Table 1) indicate stronger relationship for international students on seven of eight measures
- Regression results (Table 2) indicate consistent differential validity for international students for SJT, Continuous Learning, Social Responsibility, and Perseverance.
- Including TOEFL scores in regression, available for a subset of 663 individuals from Sample 1, did not substantially alter standardized regression weights (ΔB = -.012 to .018) (Results not shown).
- Multilevel regression was utilized to test if cultural distance via GLOBE moderated validity for non-cognitive predictors utilizing subset of 765 international students from Sample 1 from 10 countries. Results indicate culture distance did not significantly moderate validity ($p > .05$) (Results not shown).
- Utilizing subset of 73 international students from Sample 2, did not find that perceived cultural distance moderated validity of non-cognitive predictors ($p > .05$) (Results not shown)
- Correlation between GLOBE cultural distance and perceived culture distance r = - .113, *(n.s.)*

Table 1: Relationship Between Non-Cognitive Predictors and 1st Semester GPA by Sample.

	Overall Sample 1	Overall Sample 2	Domestic Sample 1	Domestic Sample 2	International Sample 1	International Sample 2
SJT	**0.14**	**0.18**	**0.08**	**0.10**	**0.21**	**0.24**
Knowledge	**0.15**	**0.15**	**0.13**	**0.13**	**0.18**	**0.19**
Leadership	**0.06**	**0.10**	**0.03**	**0.06**	0.06	**0.11**
Social Responsibility	**0.08**	**0.10**	**0.07**	**0.07**	0.02	0.04
Adaptability	**0.04**	**0.07**	0.01	**0.03**	0.06	**0.10**
Perseverance	**0.10**	**0.12**	0.02	**0.02**	**0.16**	**0.17**
Learning	**-0.05**	**-0.05**	**-0.06**	**-0.08**	**0.15**	**0.14**
Academic Ethics	**0.11**	**0.12**	**0.07**	**0.09**	**0.25**	**0.16**
N	7701 to 7702	7683	6842	6632	859	1051

** Bold numbers indicate significant relationships ($p < .05$)

Table 2: Moderated Regression Results for Non-Cognitive Predictor Relationships with 1st Semester GPA.

	Sample 1		Sample 2	
	Step 1	Step 2	Step 1	Step 2
SJT	**0.08**	**0.04**	**0.12**	**0.06**
Knowledge	**0.19**	**0.22**	**0.17**	**0.20**
Leadership	**0.04**	**0.03**	**0.07**	**0.07**
Social Responsibility	**0.05**	**0.06**	**0.03**	**0.05**
Adaptability	**-0.05**	**-0.03**	**-0.03**	-0.02
Perseverance	0.02	**-0.06**	**0.04**	**-0.06**
Learning	**-0.19**	**-0.18**	**-0.22**	**-0.20**
Academic Ethics	0.03	0.00	0.02	0.02
International Status		**-0.15**		**-0.15**
SJT X Int		**0.04**		**0.08**
Lead X Int		-0.01		0.00
Learn X Int		**0.09**		**0.08**
Knew X Int		**-0.04**		-0.02
Adapt X Int		**-0.04**		0.00
SR X Int		**-0.05**		**-0.06**
Pers X Int		**0.06**		**0.07**
Ethics X Int		**0.08**		0.01
R Squared	0.06	0.09	0.08	0.12
N	7700	7700	7670	7670

** Bold numbers indicate significant relationships ($p < .05$)

Discussion

- Results indicate consistent differential validity for some non-cognitive measures for international students, specifically for SJT, Continuous Learning, Social Responsibility, and Perseverance.
- Differential validity for international students does not seem to be the results of functioning as a proxy for English language ability.
- Cultural distance does not seem to moderate validity of non-cognitive measures.

Implications

- Non-cognitive abilities may be useful in predicting international student performance, but differential validity may be an issue.
- Negative, non-significant relationship between cultural distance via GLOBE scores and perceived cultural distance warrants caution in generalizing country-level scores to individuals.
- More research is warranted to explain differential validity for international students.

Acknowledgements

I would like to thank Sergio Marquez for assistance in data collection, as well as Jason Huang and Rick DeShon for advice regarding data analyses.

Non-Cognitive Predictors of Student Success: A Predictive Validity Comparison Between Domestic and International Students

Jacob Smith, Dr. Thea Schofield, Dr. Antonio Ibarra, Ianis Choi, Benn Mullins, Dr. Emily Williams

INTRO

- Increasing interest in utilizing non-cognitive predictors in the college admissions process
- Rising enrollment of international students

METHODS

- We compare the predictive validity of these measures across domestic and international students.
- Results indicate some predictive validity differences do exist and an explanation for this differential validity, as well as a moderator of these relationships, are tested.

RESULTS

- Consistent differential validity for some non-cognitive measures for international students, specifically for SJT, Continuous Learning, Social Responsibility, and Perseverance.
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DISCUSSION

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- Negative, non-significant relationship between cultural distance via GLOBE scores and perceived cultural distance warrants caution in generalizing country-level scores to individuals.
- More research is warranted to explain differential validity for international students.

MICHIGAN STATE UNIVERSITY

For **international students**, **perseverance** and a sense of **social responsibility** are extra important for predicting first-year **GPA**.

Table 2: Moderated Regression Results for Non-Cognitive Predictor Relationships with 1st Semester GPA

	Sample 1		Sample 2	
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Learning	-0.19	-0.18	-0.22	-0.20
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Lead X Int		-0.01		0.00
Learn X Int		0.09		0.08
Know X Int		-0.04		-0.02
Adapt X Int		-0.04		0.00
SR X Int		-0.05		-0.06
Pers X Int		0.06		0.07
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N	7700	7700	7670	7670

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Social Responsibility	0.08	0.09	0.07	0.07	0.12	0.10
Adaptability	0.06	0.07	0.10	0.05	0.06	0.08
Perseverance	0.19	0.02	0.02	0.02	0.18	0.17
Learning	-0.05	-0.05	-0.06	-0.06	0.15	0.16
Academic Ethics	0.11	0.02	0.07	0.09	0.25	0.08
N	7700 to 7702	7682	6812	6812	858	1012

Method

Samples

Sample 1: 7702 students at large, Midwestern university
- 54.1% (4165) female
- 11.2% (859) international (8.2% Chinese)

Sample 2: 7683 students at large, Midwestern university
- 52.8% (4060) female
- 15.7% international (10.4% Chinese)

Title

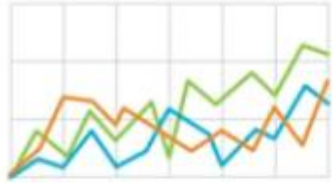
Authors

Intro

Methods

1.
2.
3.
4.

Results

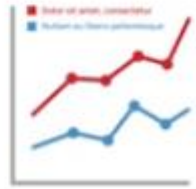


Discussion

More research is needed, but...

Main finding goes here, translated into **plain english**. **Emphasize** the important words.

Extra Tables & Figures



GOLDEN RULES:

1/ Don’t put thing in that people will likely ignore

2/ People will ignore most things

Resources

- https://osf.io/6ua4k/ . (Template)
- https://www.youtube.com/watch?v=1RwJbhkCA58. (Gen 1)
- https://www.youtube.com/watch?v=SYk29tnxASs . (Gen 2)
- https://febs.onlinelibrary.wiley.com/doi/full/10.1111/febs.13383
- https://onlinelibrary.wiley.com/doi/full/10.1111/hir.12015
- https://www.medthink.com/pdfs/predictive-analytics-for-effective-poster-design.pdf
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