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Impact of a Novel Interdisciplinary Online Course: Student Perspectives Related to Pandemics and COVID-19

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Impact of a Novel Interdisciplinary Online Course: Student Perspectives Related to Pandemics and COVID-19

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Background

- COVID-19 misinformation and disinformation → clouded judgment and perspectives
 - Multifaceted issues of politics, media, and medical knowledge
- Semester-long online interdisciplinary course implemented starting Fall 2020
 - Offers evidence-based insight
 - Addresses the far-reaching implications of pandemics and COVID-19



Objective

Evaluate the impact that this course has made on student perspectives related to various topics presented about pandemics and COVID-19

Methods

Course

Survey



Course

- Semester-long online elective course (1 credit hour)
- Unique interdisciplinary teaching style
 - Professors from different departments and disciplines within Ohio Northern University
 - Social and Administrative Pharmacy
 - Department of Pharmacy
 - School of Social Sciences and Human Interaction
 - College of Business Administration



Course

Content

Block 1: History of Pandemics and the Public Health Response

Block 2: COVID-19: The Virus and Healthcare Response

Block 3: Societal Impact of a Pandemic

Block 4: Economic Impact of a Pandemic

Block 5: COVID-19 and the Media

Presentation Methods

Online didactic instruction

Required readings

Panel discussions

Assessment Methods

Quizzes

Guided reflections

Group projects

Focus groups



Survey

- De-identified 29 question Likert scale pre-survey and post-survey
- Collected Fall 2020 and Spring 2021
- Optional, but encouraged
- Questions related to the topics included in the course
- Processed using inferential and descriptive statistics
- Analyzed with SPSSx v22 (IBM, New York) analytics software
- Reported as a de-identified aggregate
- Descriptive data are represented as mean and median
- Paired t-test with an $\alpha = 0.05$ was used for pre and post comparison data

Results



Survey

Demographics

- Fall 2020** → 24 students enrolled
- Pharmacy, public health, chemistry
- Spring 2021** → 70 students enrolled
- Pharmacy, public health, nursing

Participation

- Fall 2020** → 18 pre-survey
→ 21 post-survey
- Spring 2021** → 60 pre-survey
→ 42 post-survey

Analysis

- Aggregate pre-survey and post-survey response
- Individual semester pre-survey and post-survey response



Survey Results

Comparing Aggregate AND Individual Semester Responses

- **More likely to agree** that information they had received about COVID-19 was accurate ($p=0.04$)
- **Less likely to agree** that they had been lied to by the federal government ($p=0.01$)
- **More confident in their understanding** of COVID-19 transmission ($p<0.001$), disease process ($p<0.001$), treatments ($p<0.001$), and vaccine development ($p<0.001$)



Survey Results

ONLY Comparing Aggregate Pre and Post Responses

- **Less likely to agree** that the pandemic has negatively impacted their education ($p=0.03$)

ONLY Comparing Individual Semesters

- Reported receiving information from **different sources** regarding COVID-19 ($p=0.047$)
- **Less likely to agree** that the economy will be able to recover from the pandemic ($p=0.02$)



Survey Results

NO Significant Change in Perspectives Related to:

- COVID-19 information fatigue
- Trust in media, state government, and local government
- Efficacy of COVID-19 treatments
- Social distancing and mask utilization
- Danger of viral illnesses versus bacterial
- Susceptibility to COVID-19 infection and concern for contraction
- Anxiety toward COVID-19
- Origination of COVID-19
- Efficacy of government recommendations
- Information source accuracy
- Concern for the economic impact of COVID-19



Challenges and Limitations

- ◆ Unpredictable and ever-changing nature of the pandemic
 - ◇ Maturation bias and confounding variables
- ◆ Vaccine development timeline
- ◆ Perceptions would likely be different if surveyed at a later time

Conclusion

Factual, Scientific,
Evidence-Based
Perspectives

VS

Personal Beliefs
and Opinions

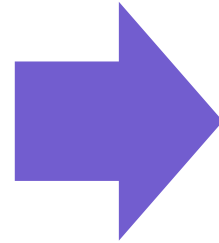


Conclusion

- ◆ **Greater change of perspectives related to factual, scientific, evidence-based information rather than change in personal beliefs and opinions**
- ◆ Ease of ability to impact and broaden evidence-based perspectives in classroom settings
- ◆ More difficult to sway personal beliefs and opinions
 - ◇ Polarizing and unwavering nature of various social, economic, and political perspectives
- ◆ Direction for future iterations of this course



**Provide students
with
evidence-based
information**



**Shape and influence
the development and
transformation of
personal beliefs and
opinions over time**

THANK YOU!

Any questions?

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