



Division of Institutional Diversity & Equity

How Assessment is Changing DEI Work – A Longitudinal Cohort Study

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Understanding the Dartmouth Context

- Rural campus in Hanover, New Hampshire
- 4,400 undergraduate students
- 2,300 graduate students
- Private, not-for-profit
- Highly selective, Ivy league institution

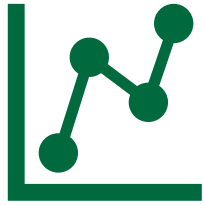


Current efforts to examine diversity, equity, inclusion and belonging have gaps.

- Reporting demographics across race, gender and other salient identities
 - Challenge: sexual orientation, religious affiliation, and political affiliation are not routinely collected
- Conducting surveys and cross tabulating results
 - Challenge: Not using a reference group



Our Approach: Move from General Assumptions to Understanding Specific Experiences




Create a randomized, representative sample of faculty, students and staff for a new pulse survey



Apply rigorous statistical testing for reliability and validity



Leverage relative risk ratios, commonly used in clinical trials to examine the experiences of each group



**Survey
Instrument:
Take the
T.E.M.P. –
Toward Equity,
Measuring
Progress**

1. I feel like I belong at Dartmouth
2. I feel connected to the Dartmouth community
3. I trust the senior leadership of the institution to further goals of diversity, equity and inclusion
4. I feel like Dartmouth is a place where people with diverse opinions and backgrounds can be heard
5. I feel like Dartmouth demonstrates a strong institutional commitment to inclusion
6. I believe Dartmouth has a process to take appropriate action in response to incidents of bias



Social Indicators

Gender

Race/
Ethnicity

Sexual
Orientation

Political
Affiliation

Building Parallel Survey Cohorts

There are two distinct groups:

- General Public – anyone who wants to participate
- Randomized, stratified cohort





Aggregated Groups of Social Indicators

Gender

- Female
- Male
- I prefer not to say
- Gender expansive

Race Ethnicity

- Asian
- Black or African American
- Hispanic or Latino
- I prefer not to say
- Two or more races
- White

Political Affiliations

- Conservative
- Moderate
- Liberal
- I prefer not to say

Sexual Orientation

- Heterosexual
- I prefer not to say
- Queer



Relative Risk Analysis

Factors	Incidence		Total
	Yes	No	
Exposed group	A	B	A+B
Non-exposed group	C	D	C+D

How many times factor exposure would increase the incidence of an individual:

$$\text{Relative risk} = \frac{\text{Incidence risk among an exposed group}}{\text{Incidence risk among a non-exposed group}} = \frac{\frac{A}{A+B}}{\frac{C}{C+D}}$$

Relative risk larger than 1 represents that risks have increased due to factor exposure.

The value obtained by subtracting 1 from the relative risk is an excess relative risk, showing an increased amount of risks.

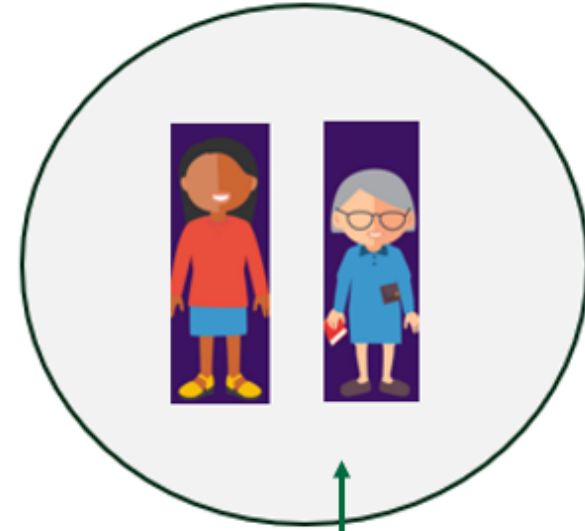


Results of Relative Risk Analysis

I feel connected to the Dartmouth community.

Social Indicator	N	Relative Risk (95% Confidence Interval)	P Value	Total sample size
A				
Group 1	246	1.26 (0.96 - 1.65)		424
Group 2	130	1.24 (0.79 - 1.95)		424
Group 3	23	0.5 (0.2 - 1.21)		424
Group 4	13	0.11 (0.037 - 0.32)	p < 0.05	424
B				
Group 1	34	0.81 (0.35 - 1.89)		424
Group 2	16	2.62 (0.35 - 19.4)		424
Group 3	12	0.87 (0.2 - 3.9)		424
Group 4	25	0.45 (0.2 - 1.03)		424
Group 5	21	1.05 (0.32 - 3.45)		424
Group 6	299	1.16 (0.95 - 1.43)		424
C				
Group 1	35	0.7 (0.32 - 1.53)		424
Group 2	67	1.29 (0.65 - 2.56)		424
Group 3	263	1.0 (0.81 - 1.24)		424
Group 4	36	1.4 (0.51 - 3.81)		424
D				
Group 1	314	1.23 (1.01 - 1.51)	p < 0.05	424
Group 2	39	0.51 (0.26 - 0.99)	p < 0.05	424
Group 3	61	0.71 (0.4 - 1.26)		424

Limitations



You will lose people to attrition, and that's ok!
(Ideally, this is < 5%)



Conclusion: Relative risk analysis coupled with a representative cohort provides more specific and actionable data for inclusion and belonging

- Clarifies experiences of each group
- Decenters majority groups for more objective conclusions
- Quantifies trends beyond response percentages



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Thank You

Any questions?