Perception of the Climate of Research Integrity in the National Health Sciences University, University of the Philippines Manila (Quantitative Phase)

Toral Jean Anne B, Wang Edward HM, Mantaring Jacinto Blas III V, and Adducul Rufus Thomas Y
(Core Members of the UP Manila Office of Research Integrity)

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Background, Objectives, and Methodology

Organizational Climate

Commitment to promote and foster
"a culture"
norms of high ethical standards
professional development encouraged
public confidence in scientific enterprise preserved

Common views, beliefs, values, and meanings that institutional participants hold and that guide an individual's behaviors and organizational phenomena

Schein E. Organizational culture and leadership, 2004.

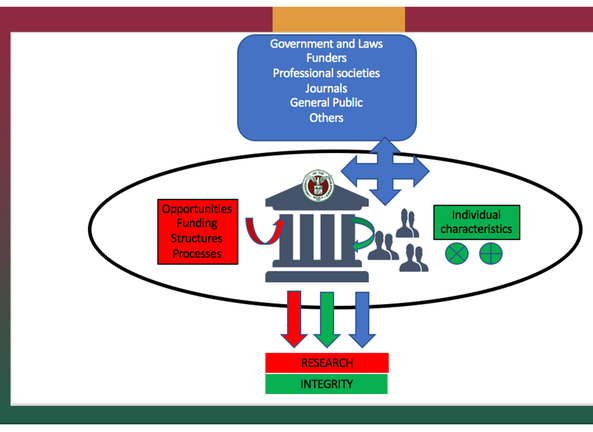
Use of a survey to establish organizational research climate (SOuRCe, Thrush CR 2007)

- The **S**urvey of **O**rganizational **R**esearch **C**limate
- Assesses research integrity climate to address risks to research integrity

Ethical leadership
Socialization and communication processes
Policies
Procedures
Structures
Processes

64 items in 4 domains
INPUT (7)
STRUCTURE (20)
PROCESS (24)
OUTCOME (13)

CONCEPTUAL FRAMEWORK

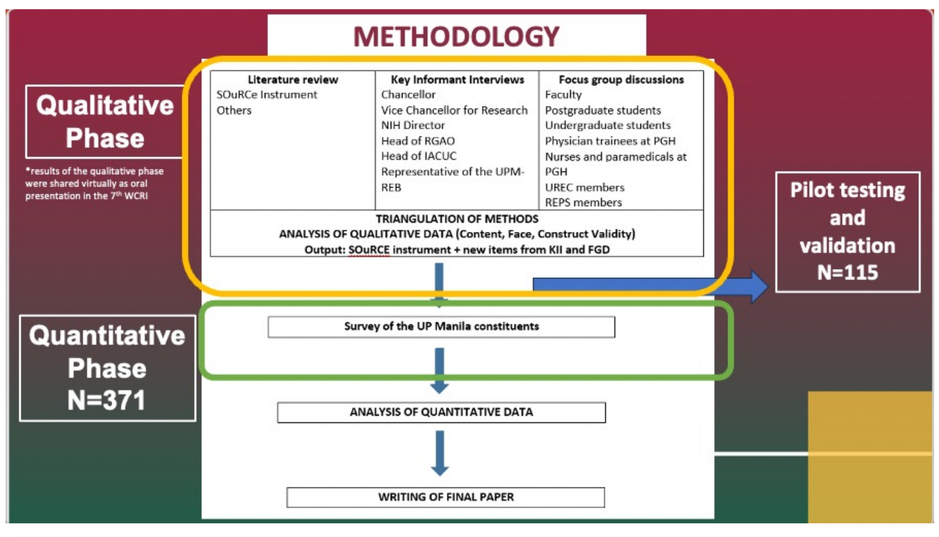


OBJECTIVES

General Objective: To characterize the climate of research integrity among researchers in the University of the Philippines Manila

Specific Objectives:
1. To adapt the SOuRCe survey tool to the study setting
2. To assess the knowledge, attitude, and practice (KAP) of the university on research integrity
3. To identify the association between perception of research integrity to academic ranks and fields of discipline

METHODOLOGY



Results (Pilot testing and validation)

The SOuRCe Instrument was modified for the assessment of the institution's research climate

Original SOuRCe 2007 (64 items)

Input (7)	Research Resources and Opportunities Available in UP Manila (6)	58 items
Structure (20)	UP Manila Research Infrastructure (18)	
Process (24)	Processes and Expectations for Research in UP Manila (21)	
Outcome (13)	State of Research Integrity in UP Manila (13)	

Results of construct validation and reliability testing (n=115)

Test/ Construct	Presence	Relevance
Overall Internal Consistency (Reliability) – Cronbach's alpha	97.52%	98.80%
Construct Validation through Factor Analysis	11 factors by Eigen Value 3 factors by Scree plot	5 factors by Eigen Value 2 factors by Scree plot

Modified SOuRCe Instrument of U.P. Manila to assess its research integrity climate

Two scales
1. Presence or absence
2. Relevance to ensure research integrity

DOMAINS	Number of items (Total 58)
1. Research environment	13
2. Resources and systems	18
3. Capacity building	9
4. Collaborations	5
5. Communication, publication, dissemination and public recognition	9
6. Personal values	4

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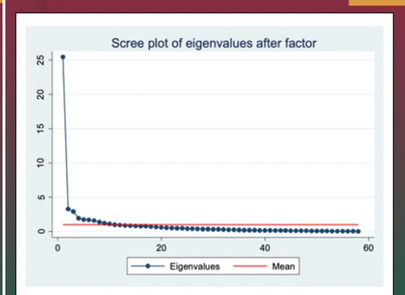

Figure 1. Scree plot of eigenvalues for the Presence dataset

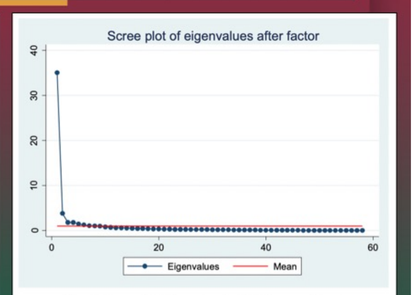

Figure 2. Scree plot of eigenvalues for the Relevance dataset

Results (Quantitative Phase)

Other Demographics
- ❖ Age range: 15-74
- ❖ 60.9% female
  39.1% male
- ❖ 29.9% had international research collaborations
- ❖ 83.6% were aware of RI concepts and issues

A total of 58 questions (in 6 domains) for presence and for relevance were categorized into three constructs namely:
Knowledge (16 questions)
Attitude (32 questions)
Practice (10 questions)

Then, a principal component analysis (PCA) per construct was done. The first principal component, that is, the one with the highest eigenvalue, was used to produce summary scores which was then standardized between 0 to 4.

DOMAINS	Number of items	Knowledge	Attitude	Practice
1. Research environment	13	-	10	3
2. Resources and systems	18	10	7	1
3. Capacity building	9	2	6	1
4. Collaborations	5	1	3	1
5. Communication, publication, dissemination and public recognition	9	3	2	4
6. Personal values	4	-	4	-
TOTAL	58	16	32	10

Comparison of Knowledge, Attitude and Practice Scores by Academic Ranks and Fields of Discipline, n=371

		2.77	Median (IQR) 3.24	3.2
	n (%)	Knowledge	Attitude	Practice
Academic Ranks				
Faculty	115 (31.00)	2.70 (1.17)	3.08 (1.00)	3.14 (0.82)
Graduate Students	55 (14.82)	2.87 (1.84)	3.38 (1.59)	3.24 (1.30)
Undergraduate	38 (10.24)	3.00 (1.11)	3.49 (1.15)	3.41 (0.92)
HCW/Physician	143 (38.54)	2.73 (1.82)	3.18 (1.76)	3.12 (1.32)
Administrative/REPS	20 (5.39)	3.16 (0.79)	3.49 (0.61)	3.55 (0.64)
	p-value[1]	*0.2115*	*0.1200*	*0.1356*
Fields				
Pure Basic	96 (25.88)	2.73 (1.83)	3.31 (1.85)	3.20 (1.28)
Pure Applied	9 (2.43)	2.37 (1.28)	2.99 (1.24)	3.14 (0.87)
Pure Clinical	122 (32.88)	2.76 (1.61)	3.21 (1.19)	3.17 (1.05)
Multiple fields	130 (35.04)	2.80 (1.36)	3.18 (1.06)	3.20 (0.97)
Others	14 (3.77)	3.03 (0.89)	3.49 (0.66)	3.55 (0.50)
	p-value[1]	*0.6440*	*0.8259*	*0.6683*

[1]Kruskal-Wallis test

- ❑ All medians above 2
- ❑ No significant differences by rank and field of research.
- ❑ The REPS had the highest KAP.
- ❑ The faculty was lowest for K and A while HCW/MDs in training were lowest for P .

CONCLUSION

- ✓ Generally, there is a high level of KAP among the constituents with all medians of at least 2. This reflects a good perception of the climate of research integrity.
- ✓ The highest level of KAP was demonstrated by the REPS.
- ✓ The lowest level of **K**nowledge and **A**ttitude were with the faculty and the **P**ractice were the HCW/MDs in training.