Métodos Quantitativos

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Metodologia de Pesquisa em Administração

- Estudo é comparação de metodologias de pesquisa entre 85-87 e 95-97
- Análise de conteúdo +- 300 artigos AMJ, ASQ, JM
- Analisou triangulação (localização do objeto de estudo) e validade (interna, externa, constructo e estatística conclusiva)
- Resultados: diminuição das validades internas, externa e de constructo→Afeta conclusões

Metodologia de Pesquisa em Administração

- Triangulação: maior especificidade do problema, aumenta capacidade de tirar conclusões do estudo
- Vários métodos para analisar o tópico, resultados mais robustos (validade externa)
- McGrath: 8 tipos de pesquisa: teoria formal, survey, experimento de laboratório, tarefas de julgamento, simulações em computador, simulações experimentais, estudo de campo e experimento de campo.
- Trade-offs
- Indução: generalização e geração de novas teorias

Tipos de Pesquisa

- Teoria: maximiza generalização mas carece de precisão de mensuração e realismo
- Survey: maximiza representatividade amostral = facilita generalização
- Experimento laboratório: causa→efeito ambiente artificial: maximiza precisão da mensuração de comportamento, mas pequena generalização e realismo
- Simulação experimental: alta precisão mensuração e realismo mas pequena generalização

Tipos de Pesquisa

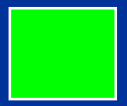
- Estudo de campo: correlacional, ambiente não controlado: investiga comportamento em seu contexto natural: muito realismo, mas pouca precisão de mensuração, controle das variáveis comportamentais e generalização
- Experimento de campo: causa→efeito em ambiente natural: coleta de dados no campo e manipulação de variáveis de comportamento; alta precisão de mensuração e realismo, mas baixa generalização

Tipos de Pesquisa

- Simulação em computador: criação artificial de dados ou simulação de processo; generalização e realismo alto, mas baixa precisão de mensuração.

Áreas principais da Administração

- Estratégia
- Teoria organizacional
- Comportamento organizacional
- Gerenciamento de RH
- Métodos de pesquisa

- Triangulação em quali/quanti ou teoria/empírica aumenta validades interna e externa, combinação de estratégias de pesquisa  , fontes diferentes num estudo de caso

	Generaliz	Realism	Precisão de Mensur	VI	VEx	VC	VEst
Teoria	+	-	-	-	+	-	
Survey	+	-	-	-	+	-	
Experimento laboratório	+	-	-	-	+	-	
Experimento simulação	-	+	+	+	-	+	
Estudo campo	-	+	-	-	-	+	
Experimento campo	-	+	+	+	-	+	
Simulação PC	+	+	-	-	+	+	

FIGURE 1
Framework for an Investigation of Trends in Management Research Methodology

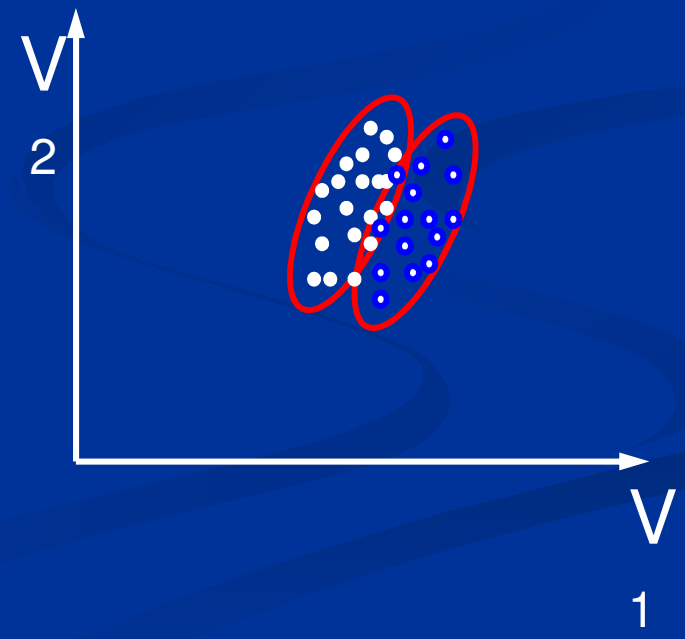
Triangulation (McGrath, 1982)	Internal Validity	External Validity	Construct Validity	Statistical Conclusion Validity
	(Cook & Campbell, 1976)			
Research Strategy			*Construct Validity*	
Formal theory/ literature reviews	Time frame	Type of sample	Confirmatory factor analysis	Sample size
Sample survey	Research strategy	Occupation of subjects	Exploratory factor analysis	Number of dependent variables
Laboratory experiment		Research strategy	Discriminant/convergent/ predictive validity	Data analytic approaches
Experimental simulation			Interrater reliability	
Field study: Primary data				
Field study: Secondary data				
Field experiment				
Judgment task			*Related Areas*	
Computer simulation				
			Other reliability estimates	
Related Areas			Type of dependent variable	
			Number of data sources	
Substantive domain				
Level of dependent variables				

Validades interna e externa

- Validade interna = causalidade
- Validade externa = generalização no tempo, entre indivíduos e configurações

Validade de constructo

- Como estudo se adequa à teoria
- Validade convergente (Alpha Cronbach, CFA) e discriminante



Validade Estatística

- Covariância e predição: afeta validade interna
- Pequena covariância entre variáveis
- Erro
- Tamanho da amostra (experimentos de campo)

TABLE 1
Triangulation: Research Strategies[a]

Research Strategy	1985–87	1995–97
Formal theory/literature review	22.90%	18.70%
Sample survey	6.90	3.60[b−]
Laboratory experiment	10.70	4.90[b−]
Experimental simulation	0.60	1.70
Field study		
Primary	38.00	40.90
Secondary	16.10	26.60[b+]
Field experiment	3.90	2.20
Judgment task	0.60	0.20
Computer simulation	0.30	1.20

[a] For the earlier period, $n = 363$ (347 + 16); for the later period, $n = 411$ (385 + 26).

[b] Time-based regression analyses revealed a pattern of usage in the direction of the change in the proportion. The symbol "+" indicates a significant increase ($p < .05$). The symbol "−" indicates a significant decrease ($p < .05$).

TABLE 2
Triangulation: Research Strategy by Substantive Area

	Substantive Area									
	Policy Strategy		Organization Theory		Organizational Behavior		Human Resources		Research Methods	
Research Strategy[a]	80s	90s	80s	90s	80s	90s	80s	90s	80s	90s
Formal theory/literature review	14	12	34	30	22	18	7	8	6	9
Sample survey	5	1	3	3	8	5	8	5	1	4
Laboratory experiment	3	0	0	0	28	17	7	3	0	0
Experimental simulation	0	0	0	0	2	2	0	3	0	0
Field study										
Primary	8	20	24	26	65	83	31	34	3	5
Field study										
Secondary	20	32	17	34	13	19	7	19	3	8
Field experiment	2	0	0	0	6	4	4	2	0	0
Judgment task	0	0	0	0	1	1	0	0	0	0
Computer simulation	0	0	0	0	1	2	0	0	0	2

[a] The absolute numbers of articles using formal theory/literature reviews and/or empirical data were used for cross-tabulation purposes. For 1985–87, $n = 363$, $\chi^2 = 87.02$, $p < .001$; for 1995–97, $n = 411$, $\chi^2 = 120.01$, $p < .001$.

TABLE 3
Triangulation: Research Strategy by Dependent Variable[a]

Research Strategy	Level of Dependent Variable							
	Individual		Group		Organization		Not Applicable	
	80s	90s	80s	90s	80s	90s	80s	90s
Sample survey	12	7	0	2	10	4	2	2
Laboratory experiment	33	15	4	5	0	0	1	0
Experimental simulation	0	0	0	0	0	0	2	5
Field Study								
Primary	79	92	11	15	28	39	26	28
Secondary	7	10	3	3	37	73	11	23
Field experiment	10	3	2	2	0	0	0	1
Judgment task	0	0	0	0	0	0	1	1
Computer simulation	0	0	0	0	0	0	1	4

[a] Only empirical articles were used for cross-tabulation purposes. For 1985–87, $n = 280$, $\chi^2 = 105.89$, $p < .001$. For 1995–97, $n = 334$, $\chi^2 = 127.13$, $p < .001$.

TABLE 4
Internal Validity: Time Frame of Studies[a]

Time Frame	1985–87	1995–97
Cross-sectional	77.40%	85.60%$^{+}$
Longitudinal	22.60	14.40^{-}

[a] For 1985–87, $n = 280$; for 1995–97, $n = 334$. The symbol

TABLE 5
External Validity: Organizational Settings and Occupations of Subjects[a]

Characteristic	1985–87	1995–97
Type of sample		
Private sector, nongovernmental	37.90%	54.30%[b+]
Public sector, governmental	17.70	10.40[b−]
Not-for-profit, governmental and nongovernmental	2.10	0.90
Mixed	20.60	11.90[b−]
Not reported	0.70	0.90
Student subjects	15.60	14.90
Not applicable	5.40	6.70
Occupation of subjects		
Professional	4.30	2.10
Managerial	21.40	23.30
Manufacturing	3.60	3.00
Health care	5.70	3.30
Education	6.80	0.90[b−]
Blue-collar	2.10	3.30
White-collar	4.30	8.90[b+]
Technical	2.80	0.30[b−]
Students	14.90	10.70
Mixed	14.90	11.90
Not reported	2.80	0.40[b−]
Not applicable	16.40	31.90[b+]

[a] For the earlier period, $n = 280$. For the later period, $n = 334$. The symbol "+" indicates a significant increase ($p < .05$). The symbol "−" indicates a significant decrease ($p < .05$).

[b] Time-based regression analyses revealed a pattern of usage in the direction of the change in the proportion.

TABLE 6
Construct Validity: Types and Evaluations of Measurements[a]

Characteristic	1985–87	1995–97
Construct validation		
Confirmatory factor analysis	4.00%	6.60%
Exploratory factory analysis	9.40	9.30
Discriminant/convergent/ predictive validity	29.90	3.30[b−]
Interrater reliability	4.70	1.80
None reported	50.70	74.80[b+]
Not applicable	1.30	1.20
Other reliability estimates	39.40	40.00
Type of dependent variable		
Tangible outcomes	41.30	34.70
Performance rating	18.90	13.70
Perceptual	11.70	16.40
Attitudinal	12.30	16.60
Not applicable	15.80	18.60
Number of sources of data		
Single	73.70	88.90[b+]
Multiple	26.30	11.11[−]

[a] For the earlier period, $n = 280$; for the later period, $n = 334$. The symbol "+" indicates a significant increase ($p < .05$). The symbol "−" indicates a significant decrease ($p < .05$).

[b] Time-based regression analyses revealed a pattern of usage in the direction of the change in the proportion.

TABLE 7
Statistical Conclusion Validity: Substantive Area, Sample Size, and Number of Dependent Variables

(a) Substantive Area	Policy Strategy		Organization Theory		Organizational Behavior		Human Resources		Research Methods	
Sample Size by Percentile[a]	80s	90s	80s	90s	80s	90s	80s	90s	80s	90s
1st–25th	12	10	12	18	37	40	12	13	2	3
26th–50th	18	7	16	9	42	26	14	12	1	1
51st–75th	13	10	8	17	26	36	20	18	0	6
75th–100th	7	26	8	19	17	34	12	21	3	8

(b) Sample Size and Number of Dependent Variables	1985–87 (n = 280)	1995–97 (n = 334)
Sample size		
Mean	428.03	498.31
Median	129.00	173.00
Standard deviation	1,680.10	1,703.52
Interquartile range	67–284	70–376
Largest sample	21,511	23,170
Number of dependent variables		
Single	38.00%	31.10%[b]
Two	16.50	18.90
Three	13.30	13.20
Four or more	16.40	18.20
Not applicable	15.80	18.60

[a] Chi-square statistic not significant for 1985–87 or 1995–97.
[b] Time-based regression analyses revealed a pattern of usage in the direction of the change in the proportion.

TABLE 8
Statistical Conclusion Validity: Data Analytical Approaches[a]

Analytical Procedure	1985–87	1995–97
Analysis of variance techniques	27.80%	13.80%[b−]
Linear regression techniques	30.70	42.40[+]
Correlation techniques	6.10	1.80[−]
Meta-analysis	1.40	0.60
Linear techniques for categorical dependent variables	3.60	6.90
Nonparametric/interpretative techniques	15.50	11.10
Factor-analytic/clustering techniques	8.30	5.10
Structural equation/path-analytic techniques	3.60	8.70[+]
Time series/event history techniques	2.60	7.50[b+]
Multiple-levels-of-analysis techniques	0.00	1.80[+]
Computer simulation techniques	0.40	0.30

[a] For the earlier period, $n = 280$; for the later period, $n = 334$. The symbol "+" indicates a significant increase ($p < .05$). The symbol "−" indicates significant decrease ($p < .05$).

[b] Time-based regression analyses revealed a pattern of usage in the direction of the change in the proportion.