

Tips on Quantitative Research Article Development

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Components of the Development Process

- Literature Review
- Abstract
- Introduction
- Methods
- Results
- Discussion



General Tips

- Tell a coherent story from beginning to end; write in the past-tense
- A thorough literature review will leave little doubt about the nature of the research question(s)
- Strictly follow your set of protocols for developing your research article and don't waiver from it
- Minimize your attention to roadblocks that distract you from addressing your established research questions



General Tips (cont.)

- Do not be afraid of results indicating 'no difference' – proceed with publishing it
- Be succinct, but try not to leave out any obvious, unanswered questions about your work
- Have appropriate mentorship and statistician resources available to you
- These tips should increase your chances of being accepted for publication and reduce criticisms and requests for modifications




Literature Review

- First, have a general topic in mind
- What studies have been conducted on the topic? How close do these studies come to addressing your topic?
- What are their findings? How old are the articles? Which populations and methods did they use?
- How many articles address your topic and how many are recent? What are their study limitations?
- What are the remaining gaps in knowledge? How can your future study address these gaps?




Abstract

- Think in terms of 'sound bytes'
- Include this even though your targeted journal doesn't require it
- 100-250 words
- Objective, methods, results, and conclusion
- Write it last




Introduction

- Make a compelling argument for conducting your study, based on results of your literature review
- Conclude by alluding to the knowledge gaps & how your study will address it
- 3-4 paragraphs in length




Methods

- How will you address the research questions
- Should contain enough info for someone else to replicate the study
- Setting and sample
- Survey construction (measures)
 - List the specific questions under study
 - Relay the exact wording of the key items (e.g., dependent variables)
- 3-4 paragraphs in length



Results

- Use a “complete-case” version of your data file
- Table 1 – descriptive; cross-tabulation of the dependent variable and all independent variables
- Table 2 – multivariate analysis
- Optional: one figure and an additional table
- Describe the findings in Tables 1 and 2 and move on – this may only be a page or so
- Don’t rehash information that is in the Tables – distill it!



Results (cont.)

Example: BMI & Cancer Screening

- Table 1 – Cross-tabulation of the ‘recent cancer screening’ (yes/no), and all of the independent variables
- Table 2 – Cross-tabulation of cancer screening by rurality by age
- Table 3 – Logistic regression




Table 1. Sociodemographic and Health Characteristics of AI/AN Elderly Males who had FOB and PSA Tests in the Past Year

Characteristics	FOB Test in Past Year		P-value	PSA Test in Past Year		P-value
	Yes n = 562 (%)	No n = 1,840 (%)		Yes n = 922 (%)	No n = 1,374 (%)	
Sociodemographic						
Age			.000			.000
55-64	34	42		36	45	
65-74	40	39		42	37	
75 and older	26	19		22	18	
Married	64	53	.000	63	50	.000
High school or more	76	72	.077	77	71	.002
Employed in past year	24	32	.000	30	31	.599
Residence			.415			.001
Urban	20	21		19	21	
Large rural	20	20		20	16	
Small rural	17	17		20	15	
Isolated rural	43	43		41	47	
Regular health provider	83	72	.000	81	69	.000
Health insurance			.017			.000
Yes	81	77		82	73	
IHS only	12	17		12	19	
No	7	7		6	8	
Health						
ADL limitations			.002			.232
0	81	87		84	87	
1-3	5	4		5	4	
4 or more	14	9		11	9	
Cigarette smoker	23	30	.001	24	33	.000
BMI category			.787			.109
Healthy	20	20		19	20	
Overweight	39	39		37	41	
Obese I	25	24		27	22	
Obese II	9	10		11	10	
Obese III	6	7		7	7	




Table 2. Prevalence of FOB and PSA Testing in the Past Year, by Rurality and Age

	Urban		Large Rural		Small Rural		Isolated Rural	
	<65	65+	<65	65+	<65	65+	<65	65+
FOB, % (C.I.)	23 (17, 28)	23 (18, 28)	21 (14, 27)	29 (24, 35)	17 (11, 23)	28 (23, 34)	19 (16, 23)	24 (21, 28)
PSA, % (C.I.)	29 (23, 36)	44 (38, 50)	43 (35, 51)	46 (40, 52)	41 (33, 49)	50 (44, 56)	33 (29, 38)	40 (36, 44)




Table 3. FOB and PSA Test Receipt Odds Ratios by BMI Category

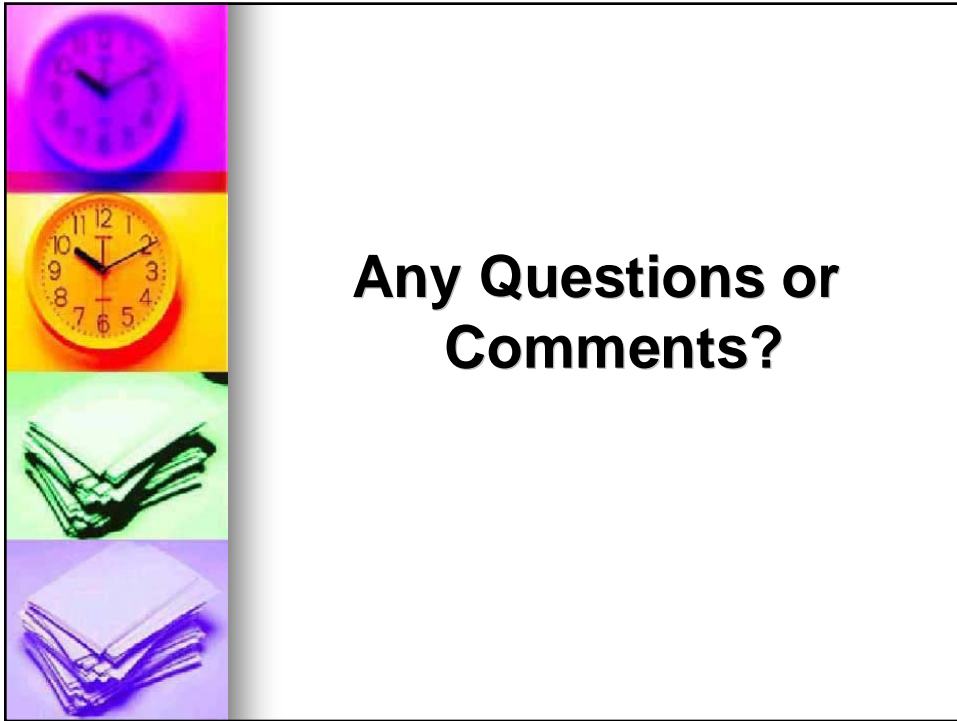
BMI Category	FOB Test				PSA Test			
	unadjusted		adjusted		unadjusted		adjusted	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Healthy	1	-	1	-	1	-	1	-
Overweight	1.0	(0.8-1.3)	1.0	(0.8-1.3)	1.0	(0.8-1.2)	0.9	(0.7-1.1)
Obese I	1.1	(0.8-1.4)	1.1	(0.8-1.5)	1.3	(1.0-1.6)	1.1	(0.9-1.5)
Obese II	0.9	(0.6-1.3)	0.9	(0.6-1.3)	1.2	(0.9-1.6)	1.0	(0.7-1.5)
Obese III	0.9	(0.6-1.3)	0.8	(0.5-1.3)	1.0	(0.7-1.4)	0.8	(0.6-1.2)

*Estimates are adjusted for age, marital status, education, employment status, rurality of residence, presence of regular health care provider, ADL limitations, and cigarette smoking



Discussion

- Highlight the most significant findings; don't just repeat the contents of the Results section
- What did you find? What are some of the potential reasons behind what you found? What are the implications of your findings?
 - Finding #1 and what it means; what did other studies find? How does it compare? Was the wording of your items different?
- Limitations
 - No such thing as a perfect study
 - Ex: not derived from medical records; subject to recall bias; convenience sampling
- Recommendations
 - Next steps for research



**Any Questions or
Comments?**