This is part of a Master’s level dissertation, where I am drafting the results section.

Assignment:

Consider the following quantitative model equation, coding table, and participant data sheet.

1. Conduct a Multinominal Regression Analysis in SPSS that shows if there is a relationship between Clinician-Patient Communications (CPC) and Patient Health Confidence (PHC)
2. Please ensure first of all, that the data meets all the assumptions in order for the multinominal regression to give a valid result (i.e. multicollinearity, independence of observations, linearity, and homoscedasticity). Please also ensure the measure of each variable is also correct (i.e. Ordinal, nominal, or scale). Provide a description of your assumptions and the tests used and why they are appropriate.
3. Show if parametric or non-parametric tests will be used for descriptive analysis

***\*\*Comments:*** *I have already started on this assignment and completed the Descriptive analysis portion. I need help with completing the Multinominal Regression analysis. Please ensure first of all, that the data meets all the assumptions in order for the multinominal regression to give a valid result (i.e. multicollinearity, independence of observations, linearity, and homoscedasticity). Please also ensure the measure of each variable is also correct (i.e. Ordinal, nominal, or scale). I have already created the dummy variables, however, I keep getting errors saying that some data should be removed or merged. I am assuming that outliers need to be omitted. Please find attached the work I have already completed, including the coding table. Let me know if you have any questions.*

**Comments by the University:**

This section should only include clear, straightforward reporting of results. Generally, the advice is not to comment or discuss your data in this section but present the findings in a clear meaningful way. Be selective in highlighting the key findings. For epidemiology research, state the actual number (“n”) and not just percentages. Summarise the data, e.g. in tables or graphs and report the n in tables and figures. Do not directly cut and paste output from statistical software. If required, present any examples of raw data (non-identifiable) or statistical calculations in an Appendix. Note that negative or non-statistically significant results are acceptable and can be interesting and/or important. For qualitative research, the findings should follow from the process of analysis described in the methodology and clearly address the research question/objectives(s). Direct quotes from transcripts or observation data should be used to highlight key aspects of the findings and should not be too extensive. Ensure that summary material (tables, graphs, line drawings, text-boxes, and photographs) are self explanatory and labelled so that they can ‘stand-alone’, requiring no reference to the text for the reader to understand them. This means that headings, captions, and legends must be carefully composed so that they are succinct and self-contained. This is not to say that the Results section should only consist of tables and figures or only consist of quotations. At the very least, you must guide the reader through the data, indicating which tables/figures/text-boxes, etc. illustrates a particular statement: “x% (n=\*\*) of the population (n=\*\*\*) agreed that y was more important than z (Table a), but did not include y in their overall top five rankings Table b).” Do not describe the Results merely in terms of “Table a shows that… and Table b shows that…” as if the section is merely a guided tour of the tables, quotes etc. Avoid repetition of the material presented in the tables in the text; only highlight the important elements. The Results should be a summary of the important findings, with due reference to the summary-material. Be clear whether material is integral to the reader’s understanding of the text or whether it is a stand-alone summary-element (table, text-box, etc.) to which the reader can refer for further information. Where you are presenting quotes, you must be selective and be clear about what concept or theme a quote illustrates. If you are analysing epidemiological data, you should also be aware of, and pay attention to, the dangers of multiple statistical significance testing.

**Figure 2.** *The quantitative model*

PHC = β0 + β1CPC + β2Gender + β3AgeCohort + β4Ethnicity + β5 EducationLevel + *e*

**Table 1.** *Coding table**for the variables*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Coding** | **SPSS Variable Name** | **Type of variable** | **Aim of Analysis** | **Test Used** |
| Identification Number | Number assigned to each participant questionnaire | ID |  |  |  |
| **Dependent Variable** | **Coding** | **SPSS Variable Name** | **Type of variable** | **Aim of Analysis** | **Test Used** |
| Patient Health Confidence level | Sum score of Likert-type responses to a multiple item measure | PHC | Continuous | * Descriptive Analysis: Mean and Standard Deviation (Parametric); Median and Range (Non-Parametric) * Statistical Analysis: Multiple Linear Regression analysis to determine relationship between CPC and PHC | * Multiple regression analysis. Assumptions will be tested, and data will be transformed if assumptions are violated. |
| **Independent Variable** | **Coding** |  | **Type of Variable** | **Aim of Analysis** | **Test Used** |
| Clinician-Patient Communications  (predictor) | Sum score of Likert-type responses to a multiple item measure | CPC | Continuous | * Descriptive Analysis: Mean and Standard Deviation (Parametric); Median and Range (Non-Parametric) * Statistical Analysis: Multiple Linear Regression analysis to determine relationship between CPC and PHC | * Multiple regression analysis. Assumptions will be tested, and data will be transformed if assumptions are violated. |
| Gender (predictor) | 0 = Female  1 = Male | GENDER | Categorical, Nominal,  Dichotomous | * Descriptive Analysis: Frequencies, proportions, and percentages * Statistical Analysis: Multiple Linear Regression analysis to determine relationship between CPC and PHC | * Multiple regression analysis. Assumptions will be tested, and data will be transformed if assumptions are violated. |
| Age cohort (predictor) | Categorical  6 = Under 20  2 = 20-29  3 = 30-39  4 = 40-49  5 = 50-59  1 = 60+ | AGE | Categorical, Ordinal | * Descriptive Analysis: Frequencies, proportions, and percentages * Statistical Analysis: Multiple Linear Regression analysis to determine relationship between CPC and PHC | * Multiple regression analysis. Assumptions will be tested, and data will be transformed if assumptions are violated. |
| Ethnicity (predictor) | 3 = Black  8 = Hispanic  6 = South Asian  2 = Asian  7 = White Non-Hispanic  1 = Another  4 = Mixed Race  5 = Native | ETHNICITY | Categorical, Nominal | * Descriptive Analysis: Frequencies, proportions, and percentages * Statistical Analysis: Multiple Linear Regression analysis to determine relationship between CPC and PHC | * Multiple regression analysis. Assumptions will be tested, and data will be transformed if assumptions are violated. |
| Education level (predictor) | 2 = none  4 = primary school  5 = secondary level  3= Post-Secondary  1=Graduate Institution | EDUCATION | Categorical, Ordinal | * Descriptive Analysis: Frequencies, proportions, and percentages * Statistical Analysis: Multiple Linear Regression analysis to determine relationship between CPC and PHC | * Multiple regression analysis. Assumptions will be tested, and data will be transformed if assumptions are violated. |