

# Medical Student Attitude Toward Personalized Medicine Report

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Begin by calling packages which will be used later in the report:

```
library(knitr)
library(psych)
```

Reading in the data from the Github Repository (/kippjohnson/PMQ):

```
tmp <- tempfile()
download.file("https://raw.githubusercontent.com/kippjohnson/PMQ/master/SurveyResponses.csv", destfile=
infile <- read.csv(tmp,header=TRUE)
```

## Demographics

	Number of Students	PercentTotal
Male	109	0.51
Female	101	0.48
No Sex Given	2	0.01
MS1	65	0.31
MS2	64	0.30
MS3	64	0.30
MS4	17	0.08
No Year Given	2	0.01
Total Dual Degree	178	0.84
Total with Research Interest	33	0.16

## EBPAS Statistics

The first step is to compute EBPAS total score, along with its subsets for scores of openness, divergence, and education. Questions 1-12 define the EBPAS scale on the survey, with its three subsets of openness, divergence, and education. There are a number of people who did not completely fill out the first 12 questions of the survey, and for this analysis they will be dropped.

Number of people who did not completely fill out the first 12 questions of the survey: **17**

We will drop all of these individuals from the rest of the study? This is something which should be discussed

Computing Cronbach's Alpha: We use the alpha() function from the psych package in R. The EBPAS cronbach's alpha is taken from the literature (Overby et al., J Pers. Med. 2014), as was done in the paper on which we are modeling this.

	N	Mean	SD	Min	Max	Range	Alpha
EBPAS	195	35.410	5.118	23	51	28	0.780

	N	Mean	SD	Min	Max	Range	Alpha
education	195	10.610	2.490	5	17	12	0.545
divergence	195	9.713	2.561	4	18	14	0.545
openness	195	15.087	2.949	5	20	15	0.814

## Remaining Analysis Plan

**Step 1: Frequencies** Calculate frequencies of medical student characteristics

Includes:

- Attitudes toward PGT testing
- Education
- Attitudes toward DTC
- Comfort using technology
- Knowledge of genomic testing concepts
- Ability to understand genomic testing concepts

*Also calculate these by covariate?*

**Step 2: T-Tests** Collapse predictors listed in Step 1 into binary categories and conduct T-tests of them vs. EBPAS-GI score.

**Step 3: Linear Regression** Model  $EBPAS \sim \text{Step 1 predictors} + \text{possible covariates}$

Covariates collected include:

- Age
- Gender
- Medical School Year
- Dual Degree
- Interest in Research