

Background

The Test of Functional Health Literacy Assessment (TOFHLA) is used to assess a patient's level of comprehension of health-related material. The TOFHLA was validated by researchers Baker and Parker et al. in two separate studies in 1995 and 1999.

This research study uses a quantitative approach to explore the levels of functioning health literacy from the general population within Toronto, while also taking into account their self-reported level of understating and exposure. The research focus for this study was revolving around the patient-physician divide. All these qualitative factors in combination with the full TOFHLA questionnaire will allow us to determine the main contributors and patterns with health literacy, as well as some of the common generalizations associated with health literacy such as primary language spoken, sex, and socioeconomic status.

Design

A haphazard approach was used to gather 100 participants from public areas such as coffee shops, local businesses, and public libraries. Interested participants were given the research package to be completed, contact information was provided before and after in order to ensure all and any questions that arose were answered. All within downtown Toronto during 9am-5pm on weekends, and 5pm-7pm during weeknights. This guaranteed a vast array of participants that span the health literacy scale from a variety of backgrounds. Snowball sampling was also used in conjunction with the haphazard approach when recruiting more participants. After the participants had completed the survey, they were asked to refer a friend or colleague if possible and convenient to participate in my research study.

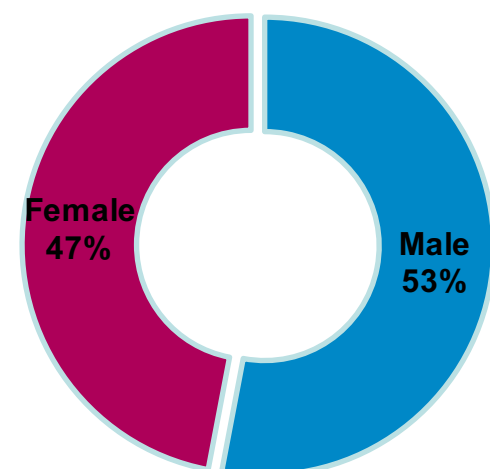


Figure 1.1: Gender split within study participants.

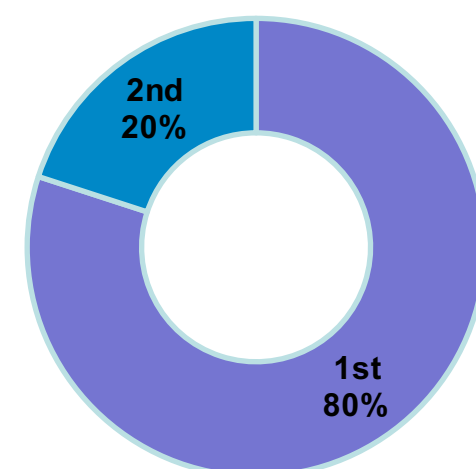


Figure 1.2: English as a first or second language within study participants.

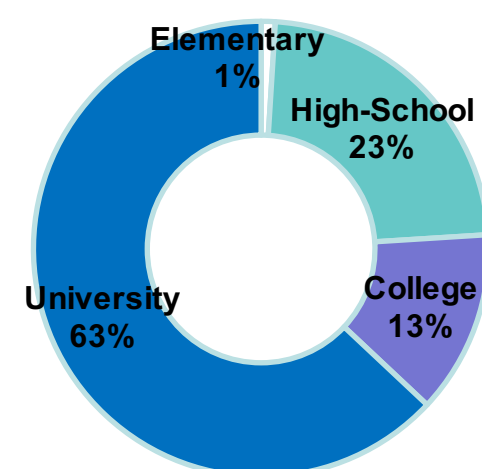


Figure 1.3: Highest level of education completed within study participants.

Results

Table 1: A hierarchical regression analysis of age, genders, and educations overall effects on the total TOFHLA score.

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|-------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .052 ^a | .003 | -.018 | 14.930 | .003 | .132 | 2 | 97 | .876 |
| 2 | .411 ^b | .169 | .134 | 13.771 | .166 | 9.512 | 2 | 95 | .000 |

a. Predictors: (Constant), Age, Sex

b. Predictors: (Constant), Age, Sex, Health Literacy Level, Education

c. Dependent Variable: TOFHLA Total Score

The trends and relationships within the data gathered were analyzed by using SPSS (2013) statistical software. The dependant variable used was TOFHLA score, in which age, gender, self-rated health proficiency and exposure, as well as education were compared against each other. One-way ANOVAs were conducted in order to identify the difference between participant groups as seen in Tables 2.1 to 2.3. One-way ANOVAs were conducted to determine whether participants differed in their TOFHLA score based on their education level, gender, first language and health literacy level. This analysis revealed a significant positive effect on TOFHLA score for higher levels of education completed $F(2,97) = 3.884, p = 0.024$ and for health literacy level $F(2,97) = 22.373, p < 0.001$. No significant effects were observed for gender or whether English was a first or second language, as significance levels were 0.837 and 0.161 respectively.

Table 2.1: One-way analysis of the effect of education on the overall TOFHLA score.

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 1607.409 | 2 | 803.704 | 3.884 | .024 |
| Within Groups | 20074.301 | 97 | 206.952 | | |
| Total | 21681.710 | 99 | | | |

Table 2.2: One-way analysis of the effect of gender on the overall TOFHLA score.

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|------|------|
| Between Groups | 9.410 | 1 | 9.410 | .043 | .837 |
| Within Groups | 21672.300 | 98 | 221.146 | | |
| Total | 21681.710 | 99 | | | |

Table 2.3: One-way analysis of the effect of English as a first or second language on the overall TOFHLA score.

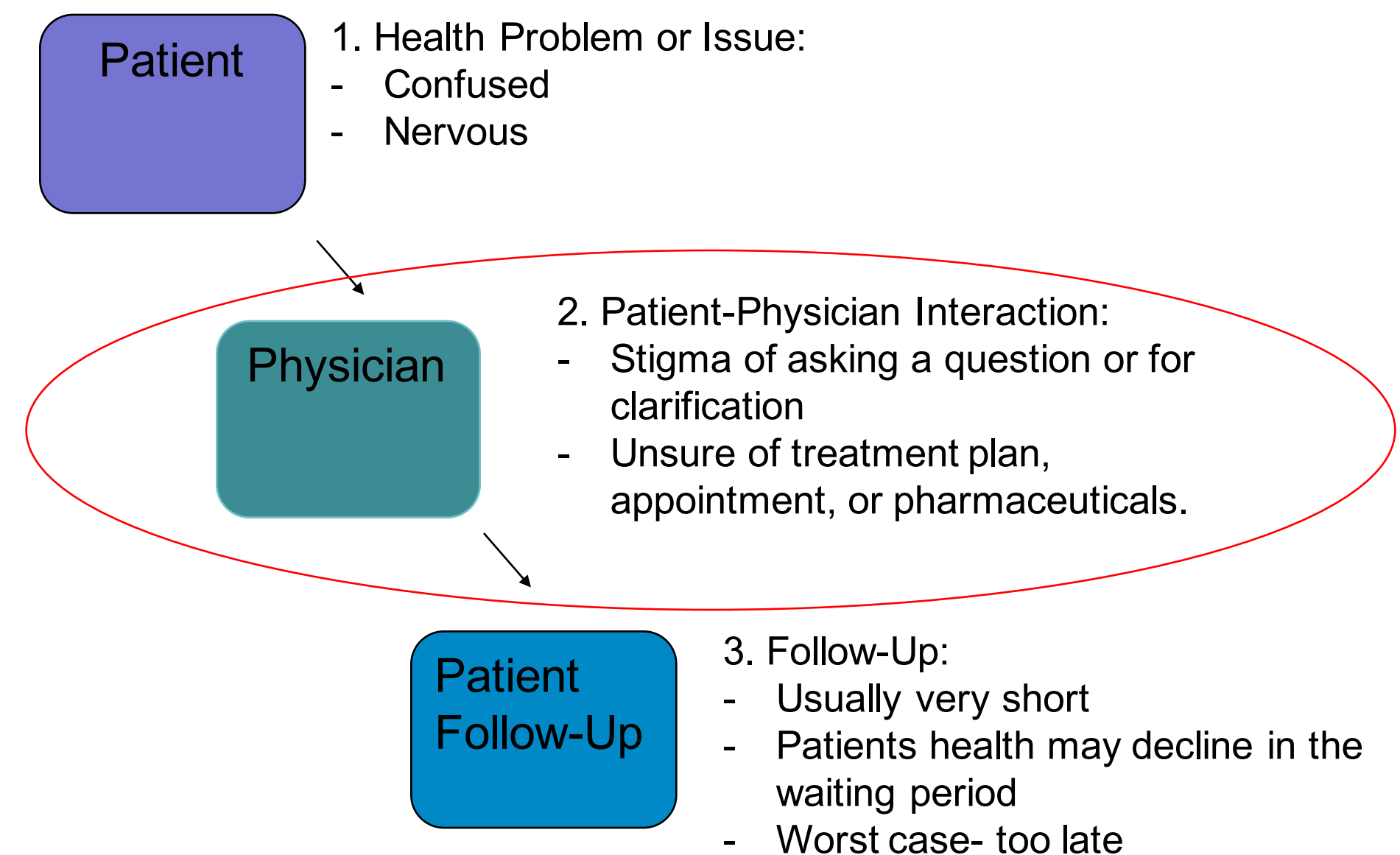
| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 431.604 | 1 | 431.604 | 1.990 | .161 |
| Within Groups | 21250.106 | 98 | 216.838 | | |
| Total | 21681.710 | 99 | | | |

Conclusion

The goal of this study was to determine the level of health literacy of Torontonians from a manageable sample size. Furthermore, to identify trends within the participants struggling with health literacy. By identifying common factors influencing inadequate results, we can use this information to help educate patients as well as healthcare providers for a win-win situation on both ends. Having patients with high efficacy, as well as physicians having less emergency calls, and return visits.

This study has shown that health literacy can effect anyone, and to stray away from the common myths surrounding the topic. This study has successfully outlined crucial areas for health care professionals to focus their efforts in bridging the gap between patient and physician, through both interactions as well as care. The results of this research study magnify the issues with the current system of educating patients as well as preparing them for discharge. Improving these weak links will allow for greater consistency of patient care, higher levels of patient recovery, as well as higher health literacy rates amongst the population.

Figure 2: improving standard patient-physician interactions.



Personalizing the initial visit and follow-up can exponentially increase patient satisfaction. Education and familiarizing patient with the cause at hand will increase their understanding, as well as self-efficacy. Making the patient more involved in their trajectory to recovery will lead to more logical and specific questions being asked, as well as less time being spent on correctional health issues from previous errors due to not understanding.