

Report One

Introduction

The gender of an individual in relation to their interest has always been a fascinating subject for psychologists, many conducting research to try and find a correlation between the two, stereotypically females will be attracted towards that of feminine activities, whereas males will gravitate towards those of masculine, yet that is not always the case. The role a gender can play for every individual is different, there is no proof as to whether a person's gender can contribute to their passion towards any aspect of life. Throughout this report, the research conducted will look at the relationship between males and females, and their chosen educational paths, to discover if said genders may have reasoning behind them. The feminine and masculine subjects that were selected to evaluate were that of psychology and computing. Interestingly, although both subjects have evolved overtime the genders interested have stayed relatively the same, there could be many factors contributing to this, for example, culture, age, but a strong possibility could be that of stereotyping being a main example, as society in our present world seems to have 'appropriate roles' (Radford & Holdstock, 1995) for each gender and stepping out of said roles may cause some discomfort or possibly confusion for some people.

The male population during our current society have seemed to play a large role in the field of computing, though that is not to say women do not have an interest in this field, primarily, it is that of males who have a fondness towards it, being for both business and pleasure. The obvious relation between males and that of computing is the use of videos games, gaming consoles; statistically a man will spend nearly double the time that of females will, interacting with the technology, 'men spent an average 49.2 daily minutes on playing games and using computers for leisure, up from 36 minutes per day in the corresponding period of 2019. Women spent an average 26.4 minutes per day on gaming and leisure computer use.' (Statista, 2022). The possible explanation of the decline of female interest towards this field may be because of the lack of appreciation in their work and efforts, 'Women's contribution to the field is often ignored because they are seen as end-users, not part of the academic mainstream.' (Clegg & Trayhurn, 2000).

While the male gender seem to have more interest in computing, it may come down to the logical side of their thinking processes, while the female population has proven to have more of an instinctual interest towards the study of the body and mind, this could possibly be because of the genetic makeover that females possess, the need to understand the makings of the mind, why individuals think and feel the way they do from each circumstance experienced, how to help someone in need, the endless questions a female may hold could be answered while in the educational process. Statistics collected show that 75% participating in psychological classes were that of females (Radford & Holdstock, 1995), making this report's hypothesis that 'Females show more interest to study that of psychology while males show more interest in that of computing'.

Method

Participants

Thirty-two students, males and females ranging from 18 to 43 who had certain attributes were gathered to take part in the study to test the hypothesis presented; each student was either on the educational programme of psychology or computing.

Design

After retrieving relative yet simple data, from the use of three question questionnaire, it was then possible to use the method of Chi square (Rao, 2002) to discover if the results correlate with the hypothesis presented.

Materials

The documentation used throughout the process of this experiment was minimal, the first being a consent form with a brief description as to the process being carried out, stating all the basic rights to the participant that they possess and that the researcher carrying out said research is completing an ethic and beneficial experiment, giving examples of their ethical rights as individuals, examples devised by the British Psychological Society such as; confidentiality, anonymity, privacy, also debriefing. (Coolican, 2019). The second piece of documentation, provided to the participating student once signing consent form, is that of a demographic questionnaire with three simple questions which is key to the research results, lastly the student is given a debrief letter showing appreciation for the participation in the research, also, again stating their ethic rights for volunteers in relation to their personal details, giving them the opportunity to come forward with any issues they may possess after participation.

Procedure

Students involved with specific educational interest were approached to participate with a research experiment online, if they agreed to volunteer for said experiment, they were presented with a consent form explaining necessary information in relation to their personal data and a brief explanation as to what the questionnaire would entail. Once the participant had signed consent form, they were then given the demographic questionnaire they had been informed about, resulting in the volunteer answering three personal questions. After the individual was comfortable with what was being asked of them and were happy to submit the information, they were given a debrief document stating an appreciation of their efforts to be involved, also stating that if there may still be any questions or issues, the researcher has no issue helping to come to a solution to the problem.

Chi-square Results

Step 1:

	Male	Female	Total
Computer	10	6	16
Psychology	5	11	16
Total	15	17	32

Step 2:

1. $\frac{15 \times 16}{32} = 7.5$

32 32

$$2. \quad \frac{17 \times 16}{32 \times 32} = \frac{272}{1024} = 8.5$$

$$32 \quad 32$$

$$3. \quad \frac{15 \times 16}{32 \times 32} = \frac{240}{1024} = 7.5$$

$$32 \quad 32$$

$$4. \quad \frac{17 \times 16}{32 \times 32} = \frac{272}{1024} = 8.5$$

$$32 \quad 32$$

	Observed	Expected
1.	10	7.5
2.	6	8.5
3.	5	7.5
4.	11	8.5

Step 4:

$$\chi^2 = \sum (O - E)^2 / E$$

$$1. \quad 0.83$$

$$2. \quad 0.74$$

$$3. \quad 0.83$$

$$4. \quad 0.74$$

Step 5:

$$0.83 + 0.74 + 0.83 + 0.74 = 3.14$$

Step 6:

$$(2 - 1) \times (2 - 1) = 1$$

$$Df = 1$$

Step 7:

$$DF = 1$$

$$\chi^2 = 3.14$$

Significant value = 0.05

$\chi^2 (1, N=32) = 3.14, p = 0.075$ - There is not significance as our value of 3.14 is smaller than the critical value which is 3.841. Therefore, there is not significance between gender and course choice.

Discussion

Throughout the completion of this report the research found seemed to have agreed with the given hypothesis, yet the results from the chosen equation method have clearly indicated that there is no significant correlation between that of genders and chosen course. Although there does indicate is a pattern has to the certain genders interest with course choices as shown by the statistics located, there is not enough evidence to back up said theory thus the hypothesis must be denied; the possibility of further research and experiments may be beneficiary to the field of psychology as it may be that the small amount of participants involved in said experiment above was not enough to fully eliminate the hypothesis completely.

References

- Radford, J., & Holdstock, L. (1995). Gender Differences in Higher Education Aims between Computing and Psychology Students. *Research in Science & Technological Education*, 13(2), 163–176.
<https://doi.org/10.1080/0263514950130206>
- Clegg, S., & Trayhurn, D. (2000). Gender and Computing: Not the same old problem. *British Educational Research Journal*, 26(1), 75–89. <https://doi.org/10.1080/014119200109525>
- Statista. (2022, June). *U.S. daily time spent playing games/computer use by gender 2021*. Statista.
<https://www.statista.com/statistics/502144/average-daily-time-playing-games-and-using-computer-us-by-gender/>
- Rao, C. R. (2002). Karl Pearson Chi-Square Test The Dawn of Statistical Inference. *Goodness-of-Fit Tests and Model Validity*, 9–24. https://doi.org/10.1007/978-1-4612-0103-8_2
- Coolican, H. (2019). *Research methods and statistics in psychology* (7th ed.). Routledge.

Appendices

- Demographic questionnaire
- SPSS Software

	Male	Female	Total
Computer			
Psychology			
Total			

	Observed	Expected
1.		
2.		
3.		
4.		