Effect of Success and Failure Motivations on Stress and Quality of Life Among Students

Allisen Nguyen[1], Kanako Taku Ph.D.[2]

[1] Medical Degree, Oakland University William Beaumont School of Medicine, Rochester, MI
[2] Department of Psychology, Oakland University, Rochester, MI

OU WB | School of MEDICINE
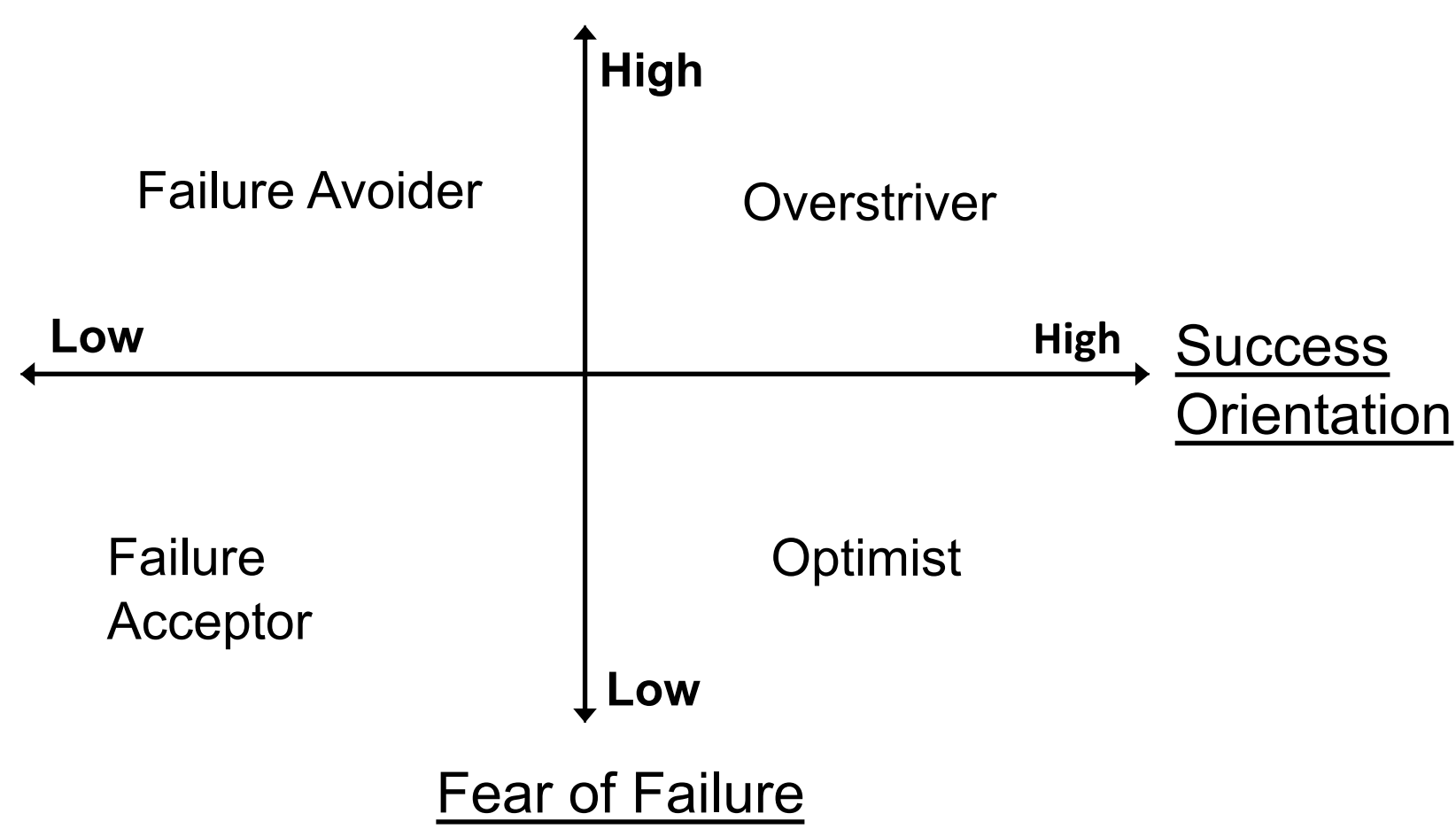
OAKLAND UNIVERSITY WILLIAM BEAUMONT

Introduction

Quadripolar Model of Success[1,2,3]
- a concise sliding scale model to demonstrate the relationship between fear of failure and success orientation, which plays a role in motivation and behavior
- individuals are driven by possible success with completion of a task, but also fear of not attaining/ reaching a goal, creating a tug-of-war scenario [4]
- model has been found to be connected to overall academic success vs. struggle [3,4]

Four main groups:
- Optimists: high levels of self-confidence, high self-efficacy, high resiliency. Proactive with tasks tend not to employ defensive or self-protective. [2,3]
- Overstriver: bright, diligent, and meticulous like optimists, but can also have anxiety, fragile self-esteem levels, and are not as flexible when challenges arise. They are driven by idea that "no stone should be unturned," which can also make them more prone to burnout and emotional tiredness.[1,2]
- Failure avoider: Driven primarily by fear and not the idea of potentially being successful. These individuals lack confidence. They develop strategies that allow them to accept failure if it happens to them.[1,2]
- Failure acceptors: Develop a pattern of helplessness, with minimal motivation that appears to be a disinterest in academics. These individuals are characteristically filled with dejection and hopelessness.[2,3]

High

| Failure Avoider | Overstriver |

Low ——————————————— High → Success Orientation

| Failure Acceptor | Optimist |

Low

Fear of Failure

Burnout [5,6,7]
- Leads to lower levels of empathy and professional conduct, with increased risk of stress, depression, and suicide[5]
- 45-49% of medical student's/ resident's report burnout [6,7]
- Medical professionals are 2-3x more likely to commit suicide

Does motivation affect quality of life and stress levels and ultimately burnout?
Can we use the results to create tools targeted at specific forms of motivations to prevent or delay burnout especially in those in the medical field?

Aims and Objectives

- To determine the student break down within the quadripolar model
- To compare the breakdown of the quadripolar model orientation in medical students and undergraduate students
- To evaluate the quality of life and stress levels in both medical students and undergraduate students
- To compare quality of life and stress levels between the groups of the quadripolar model

Online survey aimed at establishing level of success/ failure, quality of life, and stress levels

Methods

- Recruitment was through 2 different way
  - Undergraduates were recruited through SONA(psychology research recruitment tool) and given 0.5 credits for participation that can be used as extra credit in their psychology class
  - Medical students were recruited through email sent to all medical students
- Individuals with incomplete surveys were excluded, leaving 388 undergraduates and 213 medical students
- 94 question online questionnaire through Qualtrics (online survey modality)
  - Background/ Educational Background
  - Revised- Achievement Goal Questionnaire to assess for success orientation
  - Performance Failure Appraisal Inventory to assess for fear of failure
  - World Health Organization Quality of Life Assessment
  - Perceived Stress Scale
- Once results were obtained, responses were processed and analyzed.
- For data analysis Descriptive statistics, Fischer exact, and ANOVA were used for data analysis

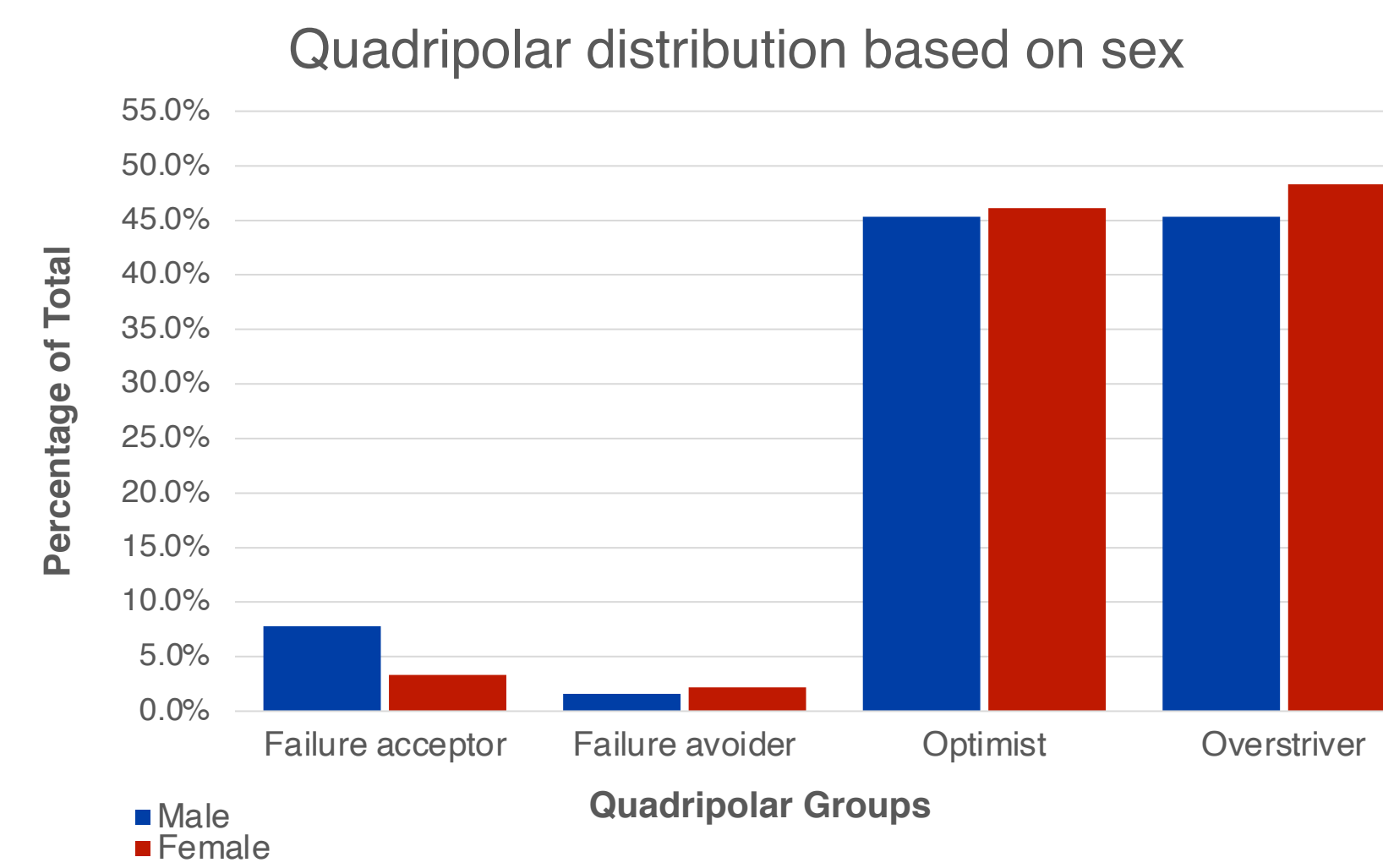## Results

Quadripolar distribution based on sex

Figure 1: Quadripolar distribution* based on sex
There is no statistical significance between males and females with most distributed in optimist and overstriver, p-value** 0.4409. 45.3% of males and 46.1% of females identified as optimists. 45.3% of males and 48.3% of females identified as overstriver.
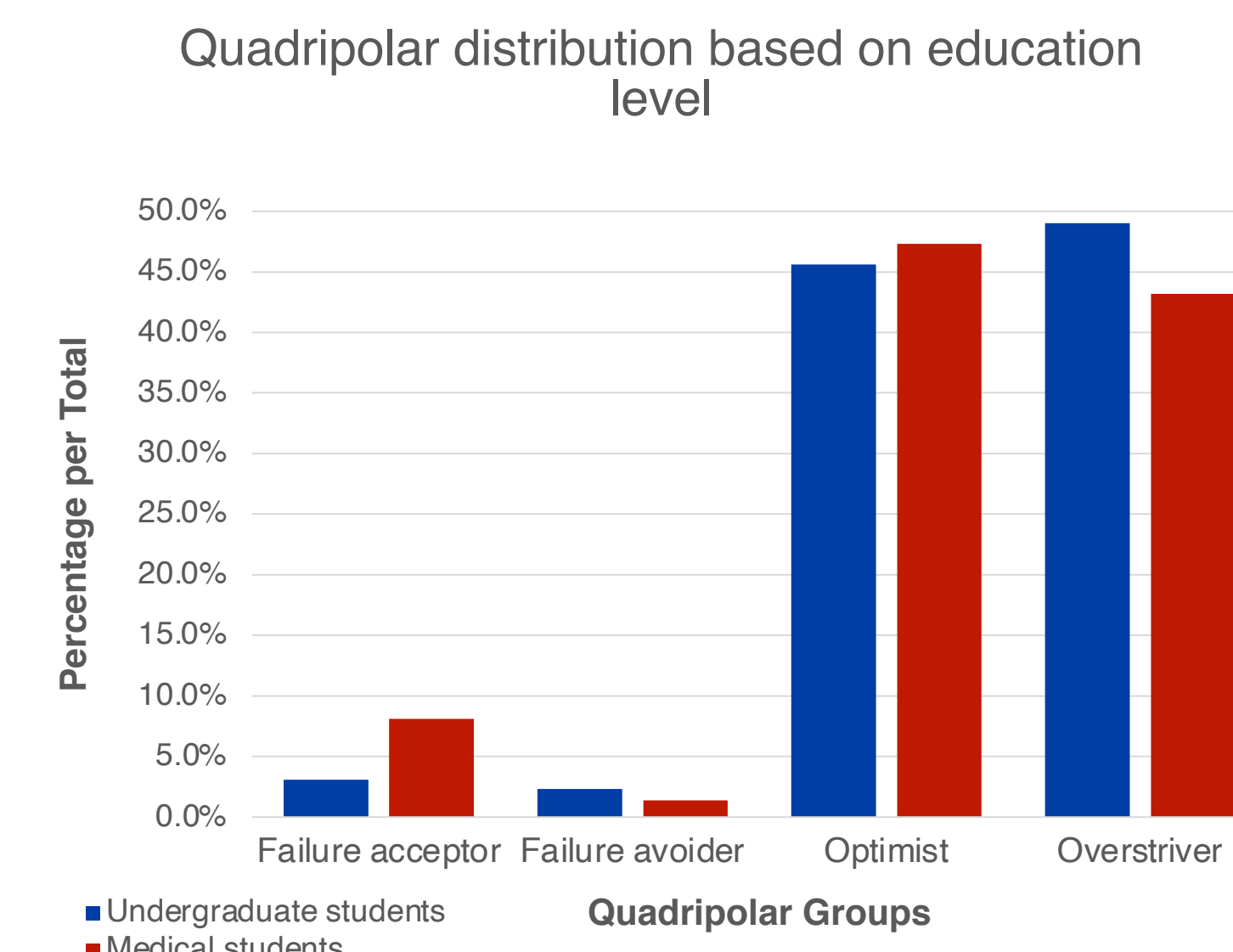

Quadripolar distribution based on education level

Figure 2: Quadripolar distribution* based on education level.
There is no statistical significance between undergraduate or medical students in terms of quadripolar identity, with most students distributed in optimist and overstriver, p-value** 0.2633. 45.6% of undergraduate students and 47.3% of medical students were grouped as optimists. 49.0% of undergraduates and 43.2% of medical students were grouped as overstriver.
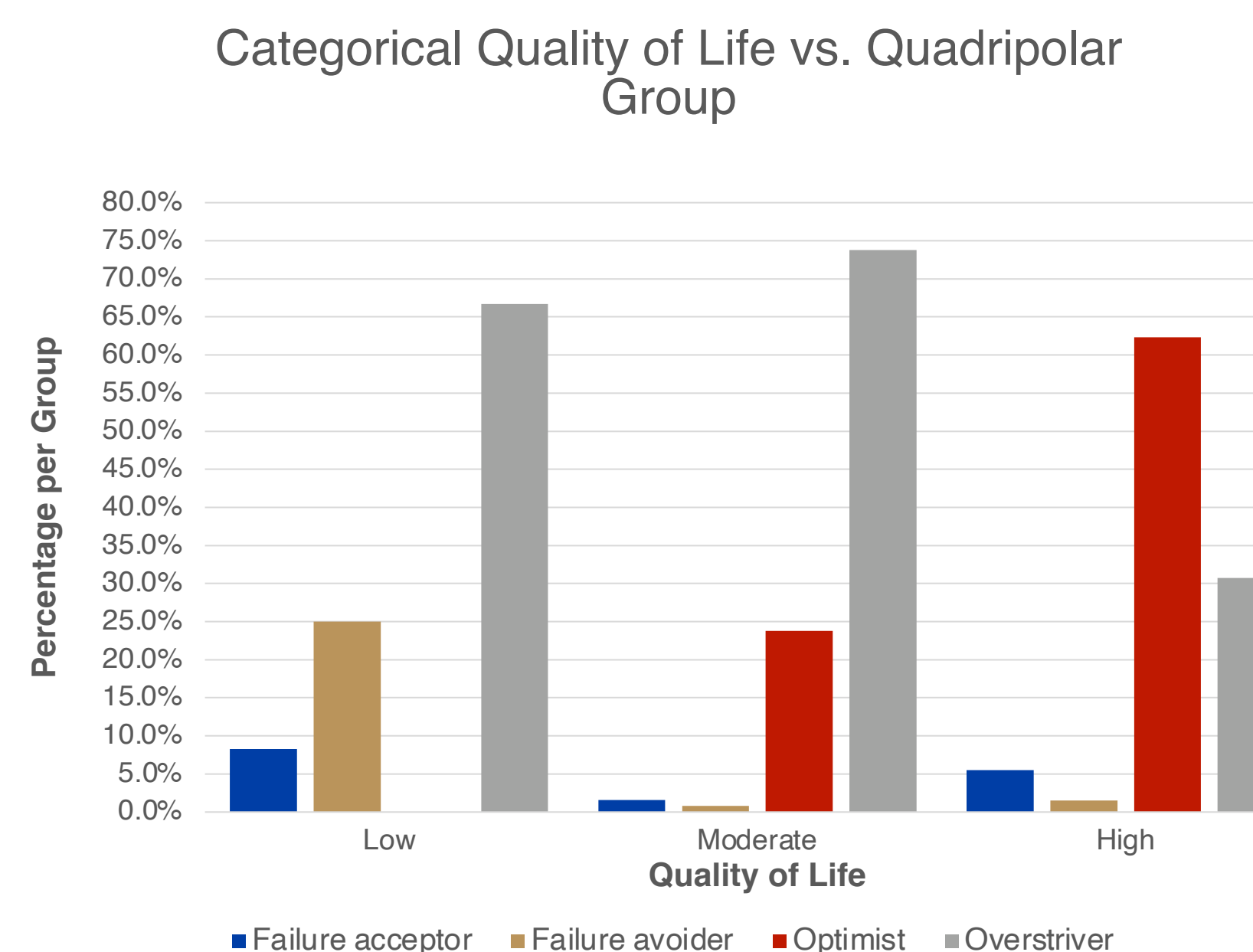

Categorical Quality of Life vs. Quadripolar Group

Figure 3: Relationship between Quality of life and Quadripolar Group*
When comparing the quadripolar group to quality of life, there is a statistically significant difference between Failure Acceptor vs Failure avoider p-value 0.0145 **, Failure Acceptor vs Overstriver p 0.0317, Failure avoider vs optimist p-value <0.0001**, and Optimist vs Overstriver p-value <0.0001**
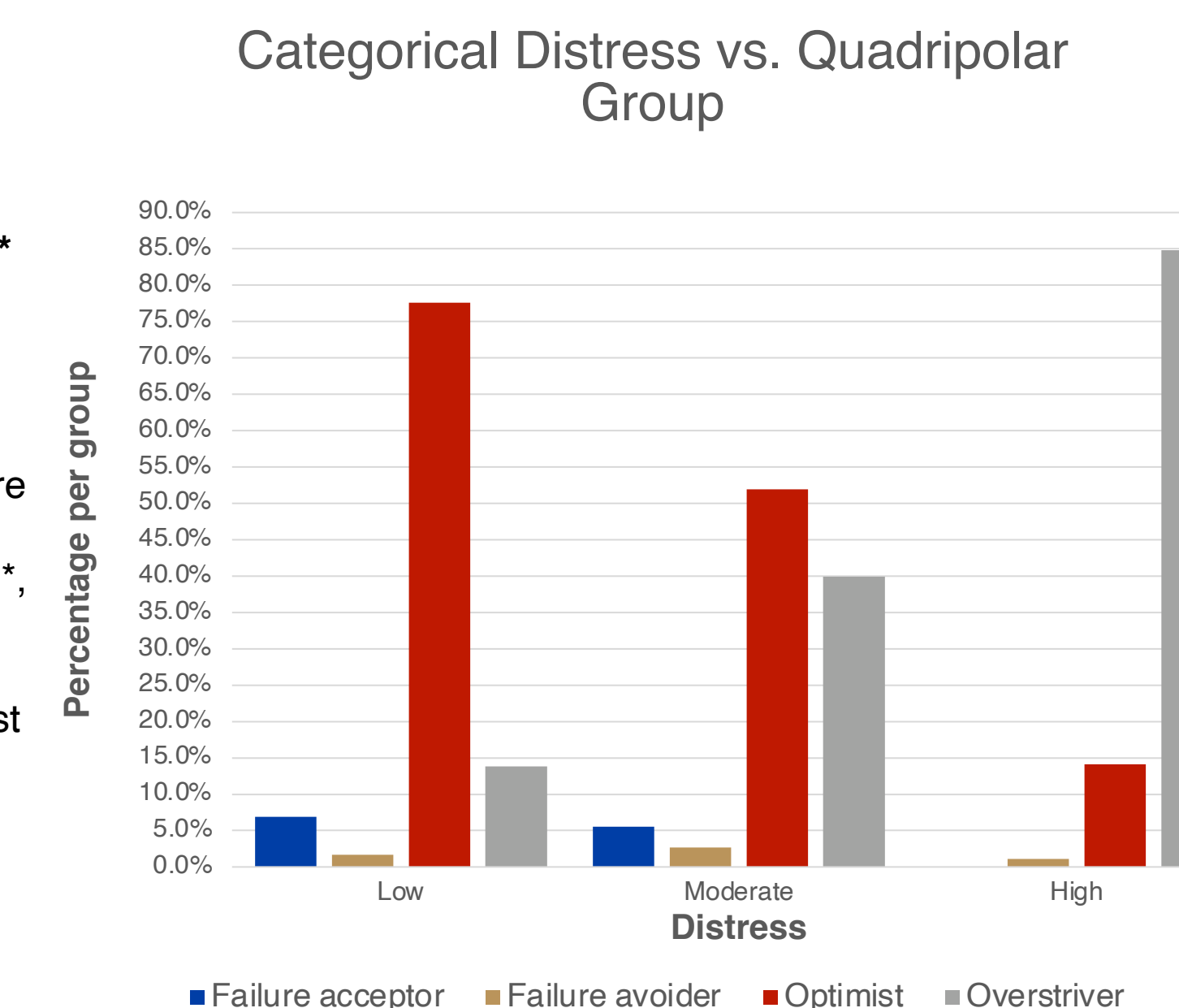

Categorical Distress vs. Quadripolar Group

Figure 4: Relationship between Distress and Quadripolar group
When comparing the quadripolar group to amount of distress, there is a statistically significant difference between Failure Acceptor vs Overstriver p-value < 0.00** Failure avoider vs optimist p-value 0.0165**, and Optimist vs Overstriver p-value <0.0001**

Summary:

- When comparing quadripolar identity to sex and education level:
  - there was no statistical significance and no difference between males/ females and undergraduate/ medical students.
  - Most individuals were optimists and overstrivers.
- When comparing quadripolar identity with quality of life:
  - Overstrivers were found to have low to moderate quality of life compared to other groups.
  - Failure avoiders tended to have low quality of life.
  - Conversely, optimists had moderate (23.8%) to high (62.3%) quality of life.
  - Failure acceptors had low, moderate, and high levels with most having either low or high

- When comparing quadripolar identity with distress:
  - Optimists had low levels of distress.
  - Overstriver had high levels of distress.
  - Failure acceptors were found to have low levels of distress.
  - Failure avoiders had all three levels but tended more towards moderate.

*Quadripolar grouping was determined using the responses to the Revised- Achievement Goal Questionnaire(success orientation) vs. Performance Failure Appraisal Inventory to assess for fear of failure
**For all figures, p-value <0.05 shows statistical significance

Conclusions

Based on the results, the quadripolar model does impact quality of life and distress.
- Individuals with low fear of failure tended towards low levels of distress.
- Similarly, those groups with high fear of failure tended towards low quality of life.
- There is minimal relationship between success orientation and quality of life/ distress.
- **There is a direct relationship between fear of failure and distress**
- **There is an inverse relationship between quality of life and fear of failure.**

Limitations of study: Only around 600 students attending a school in the mid-west were studied, limiting its generalizability to all students. Age groups, various majors, and other factors such as race and ethnicity were not studied.

Future opportunities: research further expanding the role of success/ failure in student life, stress, happiness, and motivation. Utilization of results in the academic setting to address individuals with different motivation, potentially preventing/ delaying burnout and improving quality of life.

Overall, this research is just the beginning to understanding the role of success and failure in motivations and ultimately distress and happiness. However, success and failure serve as motivators and impact quality of life and distress.

References

1. De Castella K, Byrne D, Covington M. Unmotivated or motivated to fail? A cross-cultural study of achievement motivation, fear of failure, and student disengagement. J Educ Psychol. 2013;105(3):861-880. doi:10.1037/a0032464
2. Atkinson JW, Litwin GH. Achievement motive and test anxiety conceived as motive to approach success and motive to avoid failure. J Abnorm Soc Psychol. 1960;60(1):52-63. doi:10.1037/h0041119
3. Dyrbye L., Thomas M., Power D., et al. Burnout and serious thoughts of dropping out of medical school: A multi-institutional study. Acad Med. 2010;85(1):94-102. doi:10.1097/ACM.0b013e3181c46aad
4. Martin AJ, Marsh HW, Debus RL. A Quadripolar Need Achievement Representation of Self-Handicapping and Defensive Pessimism. Am Educ Res J. 2013;38(3):583-610. doi:10.3102/00028312038003583
5. Puthran R, Zhang MWB, Tam WW, Ho RC. Prevalence of depression amongst medical students: A meta-analysis. Med Educ. 2016;50(4):456-468. doi:10.1111/medu.12962
6. Colby L, Mareka M, Pillay S, et al. The association between the levels of burnout and quality of life among fourth-year medical students at the University of the Free State. South African J Psychiatry. 2018;24:1-6. doi:10.4102/sajpsychiatry.v24i0.1101
7. Paro HBMS, Silveira PSP, Perotta B, et al. Empathy among medical students: Is there a relation with quality of life and burnout? PLoS One. 2014;9(4). doi:10.1371/journal.pone.0094133

Acknowledgements

EMBARK | on Discovery and Scholarship