

# PhD Student Perspectives on Quality of Life: Thematic Analysis of Open Responses to the 2025 Michigan Doctoral Experience Study

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## In Brief

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This report analyzes open-ended survey responses from PhD students at the University of Michigan, using text analysis to identify recurring themes and predominant emotions. Students expressed overwhelmingly negative sentiments across six thematic clusters, centering on stressful advising relationships, disillusionment with research, financial anxiety, a difficult job market, and eroding trust in the university amid geopolitical and federal pressures. While the sample skews toward dissatisfied students, the totality of these emotions suggest that—rather than ignore the proportionally small incidence of these comments—we should acknowledge the clearly complex realities navigated by students and seek to better understand challenges and external forces that create friction, stress, and negatively impact students during their doctoral studies.

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## Introduction

In a recent report ([“Yearly Changes in PhD Student Health”](#)), we examined PhD students’ self-rated mental health and found high degrees of stability in ratings from year-to-year, with the exception of the first to second year transition. While the findings from this report provide an accurate picture of the mental health of PhD students, in aggregate, we also have the ability to examine a richer set of data that supplements our understanding of how students are faring.

We use three open-ended questions from the 2025 Michigan Doctoral Experience Study (MDES) (see Appendix) to better understand the challenges students face. Using these data, we summarize a set of themes that are prevalent in the responses.

Typical caveats of these data apply. Not all students respond to open-ended questions. Often, those responding to open-ended questions seem to be motivated by negative experiences, which skews the

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tenor of the responses. Overall, these responses are likely to represent a much smaller proportion of PhD students than the full set of MDES responses, as reflected by the sheer difference in data points. Further, two of the open-ended questions used in this analysis are presented only to students that have expressed thoughts about quitting and those that have switched advisors. This could potentially further skew the responses to be negative.

Nonetheless, the data highlighted in this report are not meant to **generalize** a prevalence or modal experience. Rather, these data are meant to **highlight** a side of the PhD experience where students are genuinely struggling and might need additional support.

## Methodology

Each year the MDES team flags potentially concerning responses to open-ended questions that might meet criteria for referrals to other University resources. This approach is typically hybrid, beginning with an automated keyword search targeting self-harm, abuse, and other potentially concerning areas. The responses yielded by this approach are then reviewed by a staff member who reads the full comments. We then make joint determinations about whether to refer the students to an appropriate resource or office outside of Rackham. Referrals to outside offices are rare, and that continued to be the case this year, with no responses meeting the criteria for outside referrals.

During the course of this year's analysis, we noticed that despite the lack of responses meeting criteria for outside referrals, there was a highly negative and emotionally intense concentration of responses suggesting deep dissatisfaction with multiple aspects of the student experience. Given this, we decided to perform additional analyses to better understand the overall tenor and intensity of these responses. We used an automated content analysis approach, sometimes called a "text as data" approach, to summarize common themes and sentiments in students' responses. We discuss this approach in more detail below.

*Comprehensive Keyword Analysis.* First, we combined all the data from three open-ended responses and performed a comprehensive topic analysis using a Bidirectional Encoder Representation from Transformers (BERT) classifier. BERT is a natural-language processing approach that enables contextual understanding of language similar to the approaches used by modern Large Language Models. This enables straightforward generation of distinct topics while ignoring typical error-prone areas such as partial keyword matching, spelling errors, incomplete sentences and other similar response patterns typically found in survey data. This approach also allows us to assign multiple topics to a singular response.

*Clustering Analysis.* Before computing a full topic model, we use a dimensionality reduction technique (UMAP) to reduce a high number of dimensions (the model transformed response) to a manageable state, then use BERT's natural clustering to determine how these topics are inherently related within the clusters. This allows us to approximate response similarity within each of the calculated topics.

*Sentiment Analysis.* Separately from clustering, we also perform a sentiment analysis to determine the most prevalent emotions found in these responses. Modern sentiment analysis can label responses as

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“negative,” “positive,” or “neutral” and then calculate dominant emotions within each unit of analysis. Emotions capture feelings such as despair, anger, and sadness.

*Review of Responses.* Finally, having calculated a set of topics and clusters, and an inferred set of sentiments, we read every individual response to assess validity and better understand the reasoning behind these algorithm clarifications.

## Results

We analyzed a total of 574 responses combined across the three questions. Given the nature of the natural-language processing analysis, we excluded responses containing fewer than four words (a word is demarcated by a space). The model identifies six sufficiently distinct clusters in the data. Within each of these clusters, a varying number of topics can be situated. **Table 1** summarizes the six clusters. We label the clusters by reading the responses within these clusters and reviewing the topics. This allows us to generate overall generalizable topics under which to label each cluster.

Table 1.

Cluster Description	Number of Topics	Total Responses	Common Keywords
Doctoral Life - Stress and Well Being	16	321	health, lack, stress, doctoral, phd
Doctoral Life- Advising Relationship	6	88	primary advisor, primary, mentor, mentorship, toxic
Job Market & Funding Conditions	4	55	political, job, job market, market, funding
Exams and Requirements	3	36	exam, exams, qualifying, advance, information
Research Environment and Conditions	3	50	research, research lack, overall, results, data
Institutional Trust and Systems	2	24	university, stop, palestine, dei, biggest

The cluster analysis identifies key topics that are commonly mentioned by students and groups them into themes based on how often they are mentioned together, but the analysis is context neutral. It says little about the tone and content of those topics.

Next, we turn to a sentiment analysis to better understand what these clusters represent, and more specifically, the prevalent feeling they convey. **Table 2** summarizes the findings for each cluster. Within

each cluster, we calculate an average sentiment score. This is a score representing the average negative or positive emotion within the responses in that cluster with 0 representing a neutral response, 1 representing a positive response and -1 representing a negative response. Alongside, we calculate a *percentage negative* metric that captures the percentage of responses classified as negative.

Table 2.

Cluster Description	Avg. Sentiment Score	Percent Negative	Avg. Despair Index	Distribution of Main Emotions
Doctoral Life - Stress and Well Being	-0.59	79.7	41.0%	sadness: 39%, neutral: 21%, fear: 14%
Doctoral Life- Advising Relationship	-0.49	74.1	39.6%	neutral: 31%, sadness: 30%, disgust: 18%
Job Market & Funding Conditions	-0.47	73.5	46.2%	neutral: 32%, fear: 26%, sadness: 25%
Exams and Requirements	-0.61	80.6	40.3%	fear: 26%, sadness: 24%, neutral: 18%
Research Environment	-0.81	90.4	45.0%	sadness: 52%, neutral: 27%, fear: 10%
Institutional Trust and Systems	-0.87	94.4	47.6%	anger: 36%, disgust: 22%, sadness: 17%

The response pattern is clear. All clusters have a negative bent, which may not be surprising given the data caveats noted above. However, the fact that the research environment and institutional trust and systems clusters are so intensely negative bears further investigation. This conveys not only that the totality of ALL analyzed responses is negative but that there are intensive negative feelings across all clusters, and these feelings are nearly universal in some clusters.

To further aid with this analysis, we calculate a *despair index*. This is simply an assignment of response that contains items that can be considered to contain despair. We operationalize despair as sadness, fear, and disgust, minus the percentage of joy and surprise. In reading these responses, there was an overwhelming feeling of hopelessness and despair that came through the responses. This led to the inclusion of that index. This analysis confirms and quantifies that hypothesis and reveals percentages as high as 47.6% in the cluster related to institutional trust and systems.

To see the broken-out distribution of specific emotions, we also list the top three emotions identified in each cluster. Notice almost the entirety of the clusters are dominated by negative emotions with some neutrality mixed in. The one bright spot where joy breaks through is the research environment cluster where 8% of responses can be classified as containing that emotion.

To better contextualize each cluster, **Table 3** provides samples of the main emotions along with a sample response. This helps illustrate the tenor of the responses that dominate each cluster.

Table 3.

Cluster Description	Emotions	Response
Doctoral Life - Stress and Well Being	<ul style="list-style-type: none"> <li>· Sadness</li> <li>· Fear</li> </ul>	<p>“My work stressors have degraded my physical health and mental well-being. I miss the person I was before I started my PhD, the optimism and hope that I felt”</p> <p>“Stipend disbursement occurs too late after the program start date, leaving students without money to pay for August and early September costs. Concerns about funding and visa uncertainty persist, especially given conflicting departmental messaging that at times emphasizes "guaranteed funding" while also holding that such a guarantee is not possible. Overzealous surveillance and disciplinary action against activist groups creates an air of tension for students that makes it difficult to pursue truly free and independent thought.”</p>
Doctoral Life- Advising Relationship	<ul style="list-style-type: none"> <li>· Sadness</li> <li>· Disgust</li> </ul>	<p>“My initial advisor was not a good match. They were not interested in my research ideas or my growth as a scholar and was not helpful.”</p> <p>“previous advisor was not mentoring me and was treating me like a technician not a phd student in training.”</p>
Job Market & Funding Conditions	<ul style="list-style-type: none"> <li>· Fear</li> <li>· Sadness</li> </ul>	<p>“The shrinking job market and elimination of grant funding has made it difficult to imagine a long-term future in my field. While I'm extremely passionate about my work, I know that developing skills and professional connections necessary to find a job outside of academia will require a lot of time and effort on top of my academic workload.”</p> <p>“The prospects for tenure-track jobs are poor in my discipline. My friends outside academia earn more than I'm likely to earn in it. The work often seems to be unimportant. The students are apathetic.”</p>
Exams and Requirements	<ul style="list-style-type: none"> <li>· Fear</li> <li>· Sadness</li> </ul>	<p>“I felt a lot of stress and anxiety around the time of my qualifying exam about my ability to complete the work expected of me at the level that would be required.”</p> <p>“My first year was incredibly difficult because it was also my first time in the US and continuing my studies. There were so many differences and things were happening, and I decided to take longer for my comprehensive exams, which was also different from my classmates. This situation naturally made me feel left behind, and it still does.”</p>

Table 3. (continued)

Cluster Description	Emotions	Response
Research Environment	<ul style="list-style-type: none"> <li>· Sadness</li> <li>· Fear</li> </ul>	<p>“Not being able to be there for my family including my daughter and older parents”</p> <p>“The uncertainty of what the academic job market will look like in the next few years, and jobs for PhD-level researchers, is sometimes crippling. Makes it hard to feel good about what I am doing if I don't know I will have anything to show for it at the end.”</p>
Institutional Trust and Systems	<ul style="list-style-type: none"> <li>· Anger</li> <li>· Disgust</li> <li>· Unified Statements *</li> </ul>	<p>“This university clearly hates its students and begrudges using its resources to do anything but punish students for activism. The vitriol the regents and administration save for trans, BIPOC, and pro-Palestine students has made it extremely difficult to finish this program.”</p> <p>“The university's complicity in crimes against humanity across the globe. I feel as if my research benefits a university that uses its power and wealth to further human suffering, particularly in Palestine. I do not want to be affiliated with the University of Michigan.”</p> <p><b>“The University should stop persecuting the best of our university community who continue to act and advocate for the end of the Gaza genocide and for a free Palestine. The university's actions in ending any scheme of shared governance and blatant disregard for actual human values and human rights undermines all credibility as an institution. You don't HAVE to treat students and faculty this way. Do the right thing. End the Office of Student Conflict Resolution, stop hiring external "consultants" to prosecute students on behalf of the University, and stop treating student government and the faculty senate as a false voice that you can blatantly disregard. I can't focus on my research because there is a genocide happening in Palestine and my University, instead of supporting those trying to end it or AT LEAST not getting in our way, is punishing students, staff, and alumni for their principles and moral clarity.”</b></p>

\* The quote in bold was shared by multiple students verbatim indicating an act of unified activism as a response.

### Discussion and Summary

Our thematic analysis of open-ended responses to the 2025 MDES survey identified six distinct strands, which highlight issues of concern for doctoral students across different years of study. To summarize the findings, we find it helpful to break the analysis into two distinct areas. Although we present these areas separately, it is clear they are intertwined.

The first area is distinctly related to the day-to-day realities of doctoral life. This is an area where students struggle with stress, often make compromises about their well-being, and navigate various personal roles to balance their studies. It seems these constraints are often associated with complicated advising relationships that sometimes cross into abuse and toxicity. Students describe less than ideal advisor

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matching, poor mentoring, and a friction and blurred boundary between being a student, trainee, and employee. This is also sometimes related to confusing and overwhelming requirements to progress, and high-pressure comprehensive and qualifying exams that create both pressure to perform and added anxiety. Lastly, there is a small but intense concern about the research environment, with students experiencing disappointment and confusion about the “grind” of doing research. The predominant tone is one of disillusionment, as students’ idealized notions of the research process slip away under the practical realities of the work.

The second area is intertwined with these themes but can be more accurately described as external to the doctoral experience and more closely aligned with societal and institutional factors. These factors are both specific to Michigan’s context but also elevated to a national and international scope. First, students feel pressure to situate themselves in an increasingly hyper-competitive job market that seems to be pushing them away from tenure-track positions into professional and corporate roles that require additional training and skillsets. Here, we also hear student’s voices about finances in general and the increasing fear and anxiety about continued funding, especially from those that are affiliated with federal and foundation grants. Finally, the most intense voices (albeit small in proportion) reflect a strong disappointment with the University over its responses to geopolitical conflicts and internal pressures from the federal government. These students describe eroding trust in the University’s desire to protect and value them as scholars when their political views present problematic optics for the university. Students see this as consistent with the university’s handling of labor disputes and report confusion about their roles as both students and potential employees.

To be clear, these findings are based on a limited set of responses, some of which are conditional on being asked questions related to whether students have considered quitting their programs. This population is clearly biased towards students with some level of unhappiness with their program, the university, or both. Nonetheless, the intensity and scope of these responses provide valuable insights that might not be easily captured in changing averages or distributions of other survey questions. Within the stability of the self-reported mental health ratings students provided in [this report](#), there is also angst, sadness, frustration, fear, and bubbling mistrust. The totality of these emotions suggests that rather than ignore the proportionally small incidence of these comments, we should acknowledge the clearly complex realities navigated by students and seek to better understand challenges and external forces that create friction, stress, and negatively impact students during their doctoral studies.

## Learn More About MDES

[About the Study](#)

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## Appendix

### MDES Open-Ended Questions

1. (*If “Has your primary advisor changed during the past academic year?” = yes*): What was the reason for changing your primary advisor?
2. (*If “Looking back over the past academic year, approximately how often did you think about permanently quitting doctoral study?” is not = never*): What are some of the factors that made you think about quitting doctoral study?
3. Is there anything else you want to share about your doctoral experiences that we did not ask about?