Leveraging AI to characterize mental health experiences throughout the myasthenia gravis diagnosis journey

Raghav Govindarajan¹, Rachelle D. Rodriguez², Zia Choudhry³, Caroline Brethenoux⁴, Jacqui Pesa³, Sindhu Ramchandren⁵, Nolan Campbell³, Kavita Gandhi⁶, Kristin Heerlein⁷, Nizar Souayah⁸, Ashley E.L. Anderson⁹

Introduction

- Myasthenia gravis (MG) is the most common form of neuromuscular junction disease, estimated to affect between 36,000 and 60,000 individuals in the United States each year¹
- Anxiety and depression reportedly affect approximately one-third of individuals living with MG¹
- The negative impact of MG on health-related quality of life has been shown to increase with disease severity^{2,3}
- However, the factors associated with the increased prevalence of mental health issues in MG remain less clear

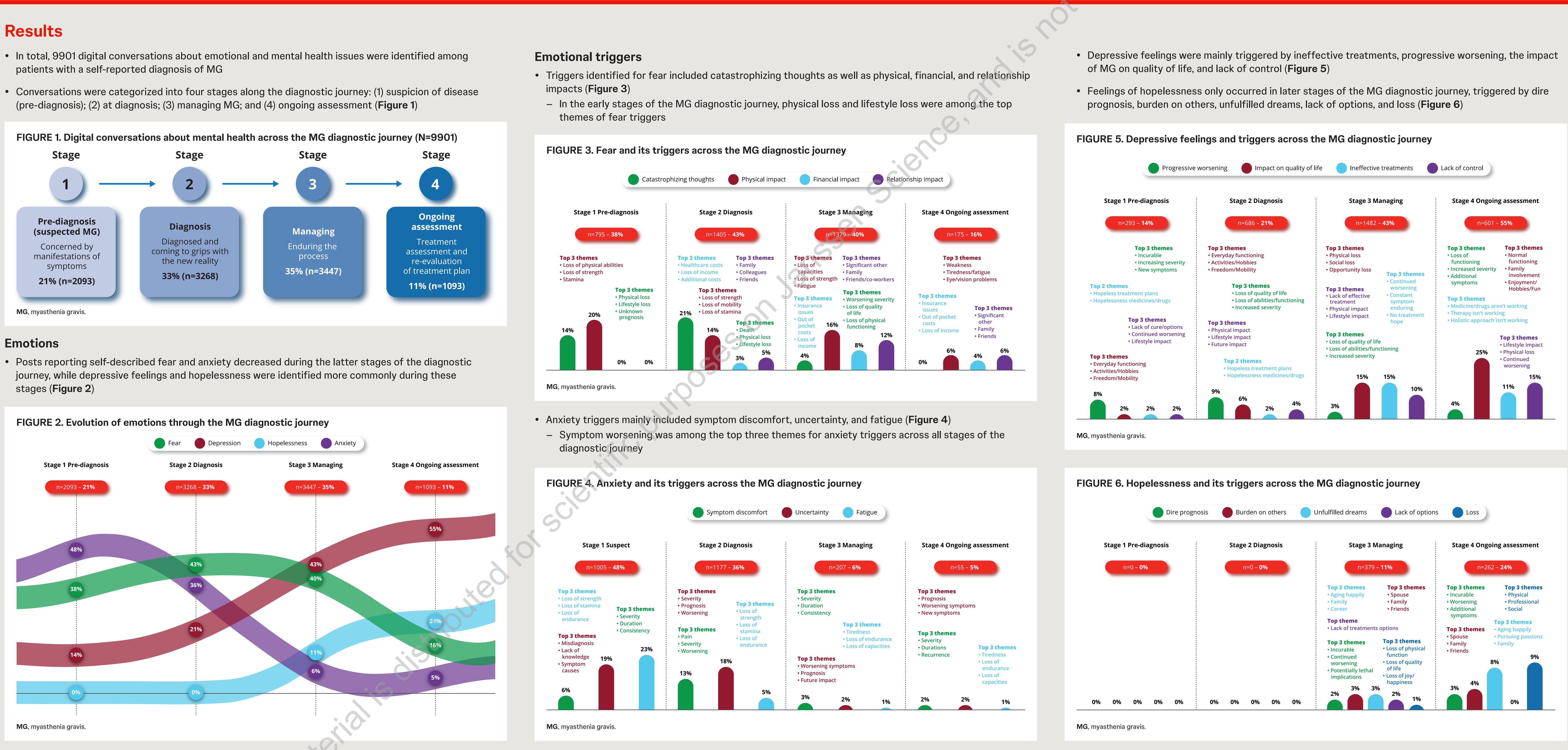
Objective

• To characterize mental health experiences of anxiety, fear, depression, and hopelessness among individuals affected by MG, and to identify potential triggers for these emotions throughout the stages of the MG diagnosis journey via analysis of MG public domain digital conversations using artificial intelligence (AI)

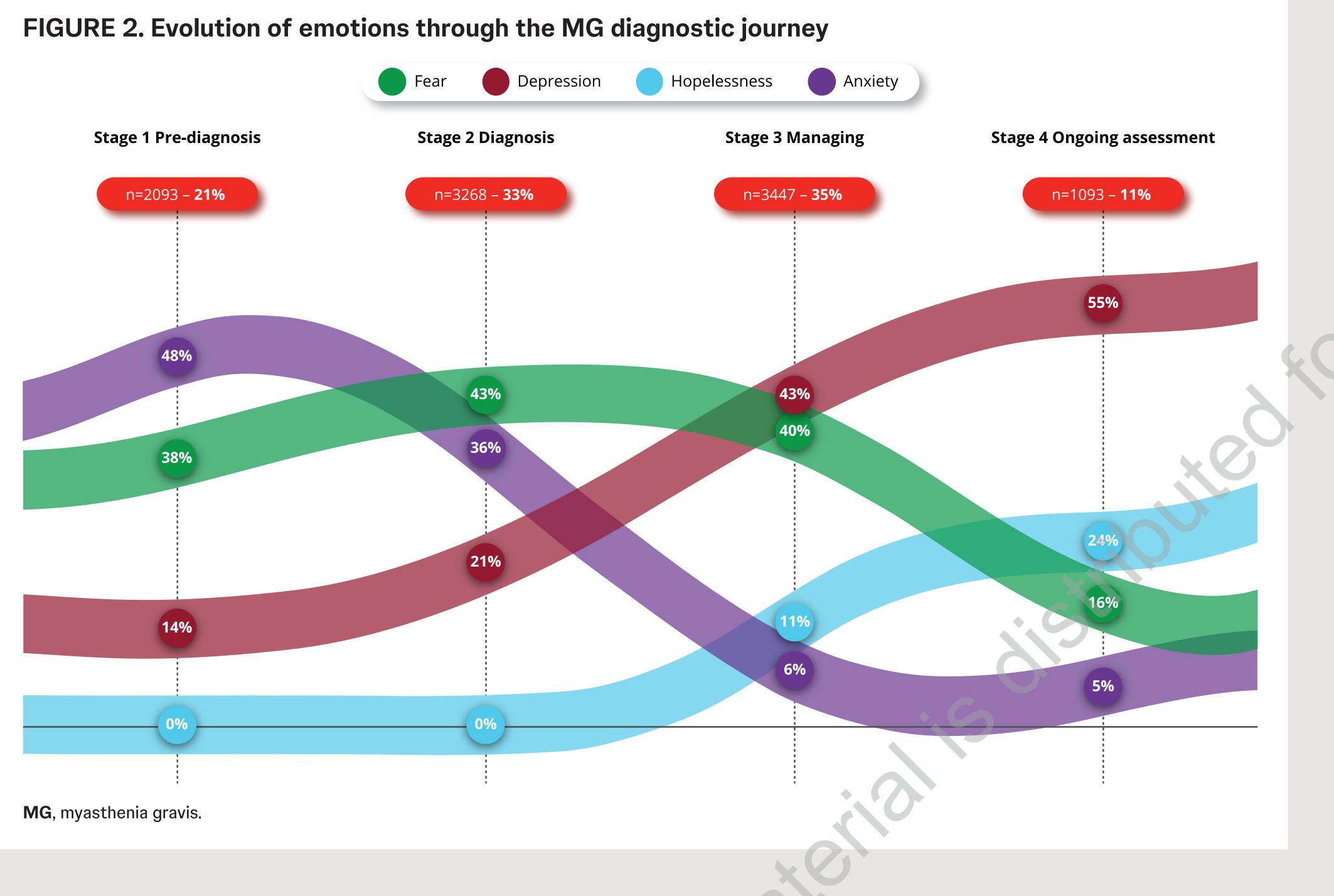
Methods

- This research was conducted using a proprietary Al-powered methodology by Human Dot Plus (previously CulturIntel; Dallas, TX, USA)
- This Al-powered methodology utilized big data tools, natural language processing, and machine learning to mine and analyze English-language public domain online conversations between August 2022 and August 2023 that were related to a (self-reported) diagnosis of MG and mental health and/or emotions
- Online conversations were assessed to characterize the perspectives of individuals with MG in terms of what they think, feel, and experience during different stages of the MG diagnostic journey
- These discussions were used to identify triggers for anxiety, fear, depression, and hopelessness, and to map these emotional experiences throughout the diagnostic journey of MG
- Recommendations were developed by the Strategy Team at Human Dot Plus based on the insights revealed through the study

Results



Emotions



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¹HSHS Medical Group Multispecialty Care – St. Elizabeth's, O'Fallon, IL, USA; ²Janssen Global Services, LLC, Commercial Data Science, Titusville, NJ, USA; ⁴Human Dot Plus, Dallas, TX, USA; ⁵Janssen Research & Development, LLC, Titusville, NJ, USA; ⁶Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ⁸Rutgers NJMS – Department of Neurology, Newark, NJ, USA; ¹Janssen Global Services, LLC, Commercial Strategy Organization, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, NJ, USA; ¹Janssen Global Services, LLC, Medical Affairs, Titusville, ⁹Houston Methodist Hospital, Houston, TX, USA

REFERENCES

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Conclusions

This digital conversation study identified decreasing mentions of self-described fear and anxiety and increasing references to depressive feelings and hopelessness as individuals progressed through the MG journey beyond diagnosis



These Al-leveraged insights highlight the importance of establishing effective holistic treatment plans early to support patients at all stages of the MG diagnostic journey

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Disclosures

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