BACKGROUND

Major depressive disorder (MDD) is the most prevalent mental disorder in the United States, causing significant patient disability and caregiver burden, and requiring extensive utilization of healthcare resources. Care of patients with MDD is suboptimal, and there are challenges in care coordination and communication among the entire healthcare team, as well as with patients. Patient education and decision-making have been linked to improved clinical outcomes. In this study, we examined the effect of two online patient education programs on knowledge of MDD symptoms, and treatments and side effects. We also sought to determine whether patients and care partners had different educational needs based on demographic characteristics such as age and gender.

METHODS

Two text-based with graphics educational activities focused on MDD symptoms and side effects of treatment were hosted on WebMD Education, a website dedicated to patient and care partner/family member education (Figure 1).

- Activities were 5 to 7 minutes in length, written at a fifth to seventh grade reading level, and included actionable next steps to facilitate learning and behavior change.

- On average, 1.56 million users visit the WebMD Depression channel each month. WebMD delivers relevant content to individual learners by use of contextual links to direct them to WebMD Education activities. In addition, learners can access content through WebMD newsletters and the site’s search engine.

- Activities included demographic questions regarding age, gender, race/ethnicity, and interest (patient vs care partners/family members). “Patient” was defined as a learner who self-identified as “having this condition” (Figure 2). A repeated pairs assessment question was included to measure impact of the education as defined by improvement in knowledge from pre- to post-activity (Figure 3).

- Statistical significance: A chi-square test determined if a statistically significant improvement (P < 0.05) occurred.

- Effect size: Cramer’s V determined the change in the proportion of participants who answered questions correctly from pre- to post-assessment (small = 0.10-0.30; medium = 0.16-0.30; large = >0.30).

- Participant data were collected between September 29, 2015, and July 1, 2016.

- There were no significant gender-based differences observed.

- Male and female patients with MDD aged ≥45 years answered correctly at a significantly higher rate than patients aged <45 years (P < 0.05) (Figure 4).

- Average drop-off rate for patients and care partners/family members, 34% (pre-assessment N = 93); post-assessment N = 76 (P < 0.01) (Figure 4).

- Care partners/family members, regardless of gender, aged ≥45 years underperformed compared to care partners/family members aged <45 years (P < 0.05) (Figure 4). Male care partners/family members of all ages underperformed other groups (P < 0.05) (Figure 5).

RESULTS

Online patient and care partner/family member education improved actionable knowledge on MDD symptoms, side effects, and treatments. This empowering, engaging, and equipping patients and their care partners/family members with information needed for self-care. Additionally, we uncovered differences, measured by performance on knowledge questions, between patients and care partners/family members aged ≥45 years compared with patients and care partners/family members aged <45 years, as well as greater educational needs among female care partners/family members of all ages.

The average drop-off rate in this study was approximately 34% for each different subgroup of participants examined. Studies that have examined the enrollment and retention of participants in web-based interventions on health-related topics show a drop-off from consent to completion of about 30% independently, with an additional 2% dropping out per every 100 survey items, some web-based studies have demonstrated greater than 33% immediate drop-off. While we are not able to determine if this education will translate to improved clinical outcomes for this population of learners, literature has shown that patient education in MDD has been linked to improved clinical outcomes. This research has implications for future design of education on mood disorders, suggesting that patients younger than 45, regardless of gender, and female care partners/family members of all ages may benefit from educational approaches targeted to their unique educational needs.

CONCLUSION

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