Reviewer's report

Title: Unmet need and psychological distress predict emergency department visits in community-dwelling elderly women: a prospective cohort study

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Reviewer: Laura Sands

Reviewer's report:

The editor requests that the comments below be described as compulsory, minor essential, or discretionary revisions. The comments below reflect compulsory revisions.

Introduction:

This study offers a novel perspective in understanding the association between unmet need and health behaviors. Specifically, the authors suggest that psychological distress may affect the association between unmet needs and subsequent health care utilization. The authors provide some background for this hypothesis, but they do not describe the conceptual framework underlying the hypothesis tested in this study. Without such a framework it is difficult to know whether the authors hypothesize that psychological distress mediates or moderates the association between unmet need and subsequent health care utilization. Also, in the absence of such a framework, it is unclear why the authors designated some of the covariates (e.g. nutritional status) as predictor variables rather than as outcomes.

An important issue that is missing from their review of the literature is how the timing of assessments of unmet need and health care utilization affect interpretation of results. For example, they cite results from the Allen and Mor study as evidence of the health consequences of unmet need. However, the cross-sectional design of that study prevents determination of whether unmet need preceded or followed the health events. This is important because health events (e.g. illness that requires hospitalization) can precipitate new unmet needs. I suggest that the authors consider an important study by Kuzuya et al. (JAGS, 2008) that examines the association between unmet needs for medication support and subsequent hospitalization. Similarly, relevant results from the Sands’ study are those that refer to the pattern of acute care admissions subsequent to assessments of unmet need, not those that refer to hospitalizations prior to assessments of unmet need. The authors should consider the issue of timing when describing their conceptual framework. Distinguishing whether unmet needs precedes or follows psychological distress is important for informing the design of future interventions to reduce consequences of unmet need.

Methods:
It is unclear what traits the psychological distress scale measures. The content of the scale should be described.

What type of care is available in a ‘Senior’s residence’? Did subjects in this living environment have continuous access to care for their disabilities? If so, then theoretically these subjects should have had their needs met.

What does the satisfaction with social support scale measure? Do items within this scale overlap with assessment of unmet needs?

Explain the system for ER admissions in Canada. Do patients self-refer themselves to the ER? Are there social risks for ER use in Canada? If so, do they overlap with unmet needs? What were the subjects’ diagnoses at ER admission? Do those diagnoses provide further validation for the conceptual framework underlying this study?

The justification for excluding men is unconvincing. Were results similar when men were included?

Was there sufficient power for assessing the association between PADL unmet needs and subsequent ER use?

It is unclear why those who have no disability are included in the analyses. I would argue that they should not be included because this is a study of unmet needs and only those with at least one disability can have unmet needs.

The coding of the unmet need variables should be explained. For example, why does the coding of the unmet needs variables differ for the bivariate and multivariable analyses? Also, it is conceptually unclear why there should be monotonically increasing risk across the categories of 0 unmet needs, 1 unmet needs and 2+ unmet needs as suggested by their statement, “…presence of each additional IADL unmet need increased the likelihood ….. by 57%.”

Discussion:

Two paragraphs in the discussion contrast results from this study with those of other studies. The comparisons are unhelpful because the studies are not comparable. The Allen and Mor study did not assess subsequent health care utilization and the Sands et al. study described unmet need as the complete absence of a caregiver. Conceptually, complete absence of a caregiver is very different than self-reports of unmet need. The authors should use the discussion to describe whether the results of this study confirm their underlying the entire conceptual framework (both the independent variables and covariates).

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

Non financial interests include federal grant funding and prior publications on this topic.