

## Multimedia Appendix 4

*This is a Multimedia Appendix to a full manuscript published in the J Med Internet Res. For full copyright and citation information see <http://dx.doi.org/10.2196/jmir.45754>.*

Five categories of the Zangerie and Bauer [41] framework were not used.

### Ranking

Within the NEON Intervention web application, there are four ways of accessing narratives: a single recommendation provided by NarraGive, a single narrative selected at random, a list of narratives filtered by tags, and a list of previously bookmarked or hopeful narratives.

Ranking metrics measure the quality of a ranked list of recommendations [41], but since NarraGive presents a single recommendation rather than a list, this category of metrics was not used.

### Novelty

Novelty metrics measure the extent to which recommended items are new to the participant. However, since NarraGive was designed to only recommend un-accessed narratives, this category of metrics was not used.

### Serendipity

Serendipity, similar to novelty, measures how *new* and *unexpected* recommendations are [33]. Since this element of surprise is provided through the random-access method instead, this category of metrics was not used.

### Fairness

Fairness across items, analogous to unfairness across participants, measures the fairness of exposure across item groups [41]. This category of metrics is based on the assumption that equally-relevant items should have equal exposure [57]. However, given the highly personal nature of health experiences, it is less important whether there is variation in exposure of similarly-relevant items, and more important that the items that *are* presented are relevant (measured by the precision metric), that there is fairness across *participants* (measured by the OU metric), and that there is *overall* exposure of items (measured by the ISC metric). Thus, this category of metrics was not used.

### Business-oriented

Business-oriented metrics measure the business value of recommendations [41]. Since NarraGive is not used in a business context (ie, the authors of the narratives neither pay to have their narratives recommended, nor receive payment for usage of their narratives; the owners of the web application do not receive payment when participants use the site or rate narratives highly; and there are no items available for sale), this category of metrics was not used.