

**Master's Thesis of  
St. Luke's International University  
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**Title**

**Effectiveness of Decision Aids for Women Considering  
Breast Cancer Surgery:  
A Systematic Review and Meta-Analysis**

**Student Number: 18mn009**

**Yumi Koga**

## Abstract

**Background:** Choosing breast cancer surgery as a treatment is a sensitivity decision for women with breast cancer. The aim of this review was to determine the effectiveness of decision aids tools for women considering breast cancer surgery at any stage.

**Methods:** This systematic review was conducted following the preferred reporting items for systematic reviews and meta-analyses guidelines and the Cochrane handbook for systematic reviews. My search included individual, cluster and quasi-randomized controlled trials published up to 31 October 2018 that assessed the effectiveness of decision aids tools or supports for women considering breast cancer surgery. I determined the methodological quality of all included studies using the Cochrane risk of bias tool. Descriptive analyses of the outcomes were performed. I conducted a meta-analysis on those studies meeting the inclusion criteria for analysis.

**Results:** The database contained 6,777 reports. I included 10 trials from 13 reports using the full text. The meta-analysis revealed: increased knowledge about their surgery ( $SMD\ 0.30$ ; 95%  $CI\ [0.10, 0.51]$ ; participants = 737; studies = 5;  $I^2 = 48\%$ , *moderate certainty of the evidence*) and decreasing decisional conflict compared decision aids and usual care ( $SMD\ -0.36$ , 95%  $CI\ [-0.51, -0.22]$ ; participants = 743; studies = 5;  $I^2 = 0\%$ , *moderate certainty of the evidence*). Other outcomes were: satisfaction with decision aids ( $SMD\ 0.01$ , 95%  $CI\ [-0.27, 0.30]$ ; participants = 519; studies = 4;  $I^2 = 57\%$ ), acceptability

(*RR* 0.96, 95% *CI* [0.86, 1.07]; participants = 530; studies = 3;  $I^2$  = 66%, *very low certainty of the evidence*), and anxiety had no statistical differences. There were no reports about the outcome of patients' quality of life (QOL).

**Conclusions:** Compared to usual care, decision aids for women considering breast cancer surgery improved knowledge and decreased decisional conflict. Future research needs to investigate decision aid's outcomes on patient's QOL. It is important for health care providers to become established in skill and knowledge about decision aids for clarifying women's preference and improving their satisfaction when considering breast cancer surgery.

**Keywords:** Decision Aids, breast cancer, surgery, meta-analysis