



Can educational interventions by pharmacists help patients with pain from cancer? A systematic review and meta-analysis.

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Background

- Every year 163,000 patients die from cancer
- A third of cases experience associated pain ^(1,2, 3)
- There is a need for medicines support for patients ⁽⁴⁾
- Educational interventions by healthcare professionals can make positive differences ⁽⁵⁾
- No systematic review into pharmacist contributions has ever been published.

Hypothesis

Educational interventions by pharmacists may improve pain for patients with cancer compared with standard care.



Methods

- 7 databases searched resulting in 989 records.
- 871 excluded after screening by title and 82 by abstract.
- 4 studies fulfilled inclusion criteria and were included.
- Quality assessed using the Cochrane tool for risk of bias.
- Meta-analysis carried out using Rev-Man.



Results

- 944 patients included
- Three studies in China and one in UK
- Mixture of Hospital and Community
- All pharmacist delivered counselling, one with dose adjustment, two providing written information
- Mixture of face-to-face and telephone delivery
- Ranging from 8 to 16 sessions delivered
- Follow-up between 8 days and 6 months



Methodological quality of studies

Powers 1983	+	-	-	+	?	-	
Wang 2013	+	?	-	?	?	+	?
Chen 2014	-	-	-	?	-	+	
Wang 2015	+	-	-	?	+	?	
	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective reporting	Other bias



Outcome measures

Side effects

Pain Intensity

Quality of life

BPI with movement

Opioid administration

Type of opioid

Financial difficulties

Nausea symptoms

Patient satisfaction

Pain symptoms

Pain interference

Appetite loss

Dyspnoea

Constipation

Pain score

BPI in the last week

Psychological problems

Changes in sleep

Knowledge

BPI current

Patient feedback

Pain relief

BPI at rest

Attitude

Fatigue

Diarrhoea

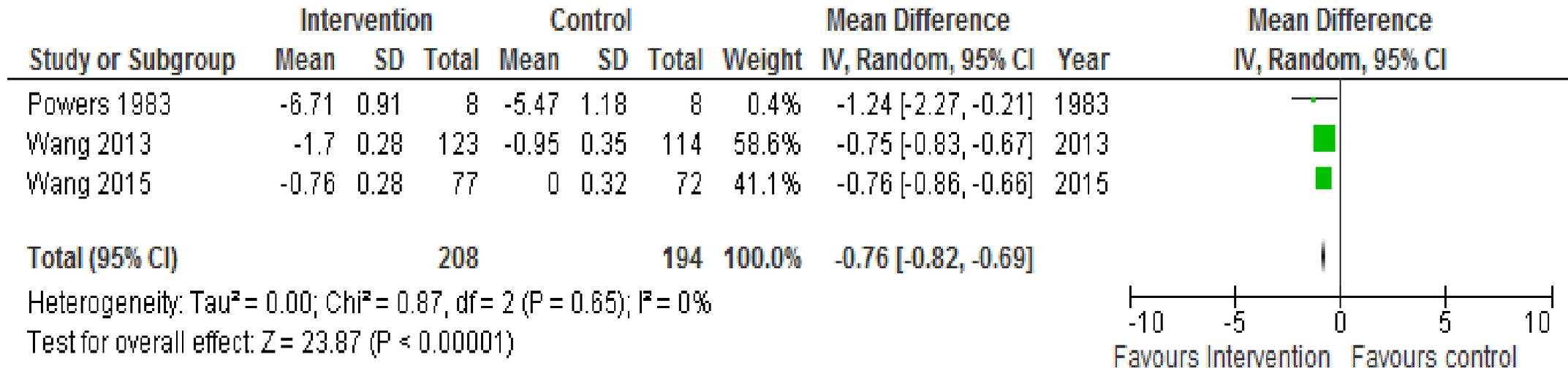
Dose titration



Effectiveness

Author and date	Main findings
Powers 1983	<ul style="list-style-type: none">• Intervention group lower dosage of opioid• Fewer side effects• Increased patient satisfaction• Pain reduced in both groups
Wang 2013	<ul style="list-style-type: none">• Pain interference scores improved• Knowledge and pain scores improved in both groups
Chen 2014	<ul style="list-style-type: none">• Less frequent prescriptions• Less side effects• Improved quality of life
Wang 2015	<ul style="list-style-type: none">• Improved quality of life• Knowledge increased in both groups

Meta-analysis





Conclusions

- Educational interventions by pharmacist are shown to have a positive effect on pain intensity.
- We still do not know which different components of the interventions are effective
- Few studies of varying quality have been carried out.



Recommendations for future research

- Further high quality experimental studies are required
- Studies should be reported in enough detail to allow for replication
- Analysis of studies should focus on assessment of different components of interventions
- Outcome measures should be standardised and focus on pain



References

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