

2017 Evidence Based Practice Proposal

Music Therapy:
A Complementary and
Alternative Modality for the
reduction of Perioperative
anxiety

Thinking Outside of the Box

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- Low cost non-pharmacological intervention reported to reduce perioperative:
 - Anxiety
 - Pain
 - Possibly recovery times

(Bradt, Dileo, & Shim, 2013; Johnson, Raymond, & Goss, 2012)
- One large study found music therapy more effective than Midazolam in reducing pre-operative anxiety and equally effective in the reduction of physiological responses of anxiety. (Bradt, Dileo, & Shim, 2013)
- Several recent studies point out that music therapy decreases the sympathetic nervous system responses and increases the activation of the parasympathetic nervous system resulting in a reduction of anxiety and a sense of relaxation.

(Thompson, Moe, & Lewis, 2014; Lee, Chao, Yiin, Chiang, & Chao, 2011; Palmer, Lane, Mayo, Schluchter, & Leeming, 2015)

Introduction - Music Therapy



- Enhanced Patient Experience (EPE)
 - Reduce patient stays without reducing patient satisfaction scores.
 - EPE recovery time goal: ≤ 60 min.
- Anxiety must be treated: untreated anxiety can increase anesthetic requirements which may lead to recovery complications. (Ni, Tsai, Lee, Kao, & Chen, 2012)
 - Barriers
 - Pre-op Anxiolytic – Midazolam reported to delay recovery time.
(Binns-Turner, Wilson, Pryor, Boyd, & Prickett, 2011)
 - SYB ASC has reduced Midazolam use but is still not meeting recovery time goal of ≤ 60 min.
- This was an opportunity to consider a complementary and alternative modality (CAM) like music therapy.

Clinical Issue



Population:

Intervention:

Comparison:

Outcome:

In adult ambulatory surgery patients, how does implementing music therapy, compared to anxiolytic medications alone, affect patient anxiety, pain, satisfaction scores, recovery times, and healthcare costs?

Question (PICO)



Electronic Searches and Terms:

- The Cochrane Library: Surgery patients, Music Therapy, Anxiety
 - 4 results
 - Bradt, J., Dileo, C., & Shim, M. (2013). Music interventions for preoperative anxiety (review).
- PubMed: Surgery patients, Music therapy, Anxiety, Satisfaction
 - 36 results
 - Hole, J., Hirsch, M., Ball, E., & Meads, C. (2015). Music as an aid for postoperative recovery in adults: A systematic review and meta-analysis.
- CINAHL: Surgery patients, Music therapy, Anxiety
 - 13 results

Search Strategy



Article	Type	Sample	Intervention	Outcome	Level of Evidence
Bradt, et al. (2013) Music interventions for preoperative anxiety	Systematic review Meta-analysis (Cochrane)	26 RCT's	Listening to pre-recorded music in preoperative unit	 Anxiety	I
Hole, et al. (2015) Music as an aid for postoperative recovery in adults	Systematic review Meta-analysis (Lancet)	72 RCT's	Any form of music initiated before, during, or after surgery	 Anxiety Pain  Satisfaction	I

Evidence Synthesis Table



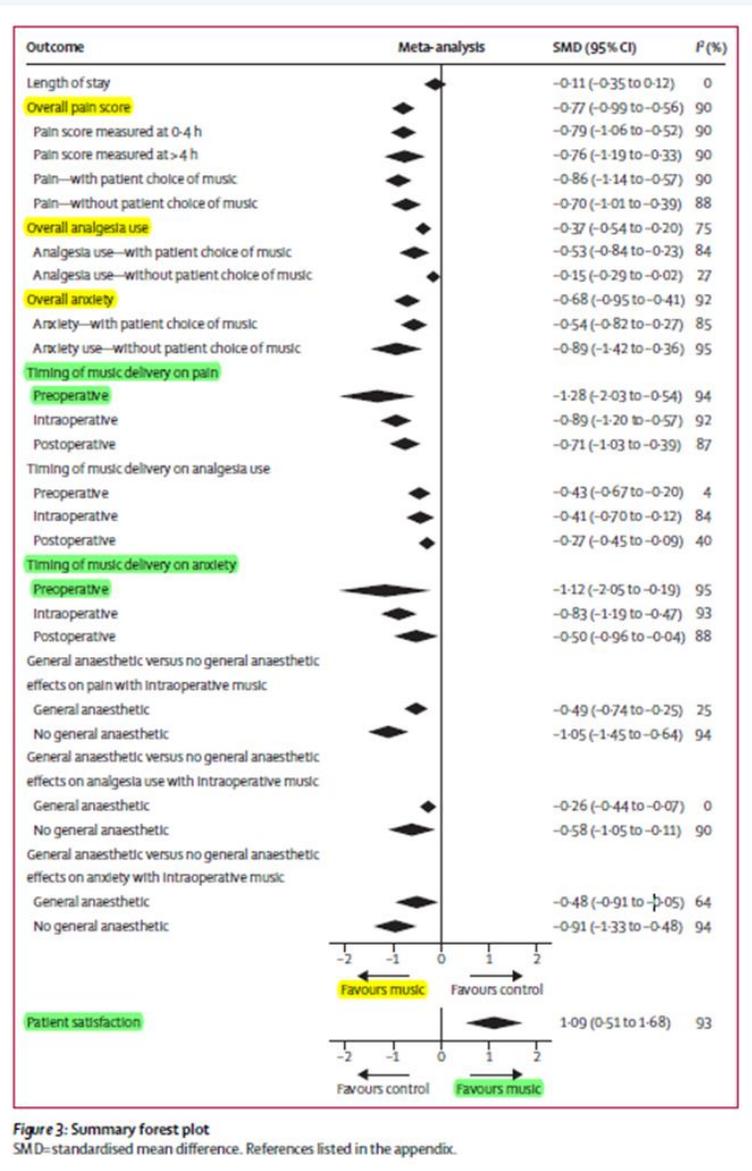


Figure 3: Summary forest plot
SMD=standardised mean difference. References listed in the appendix.

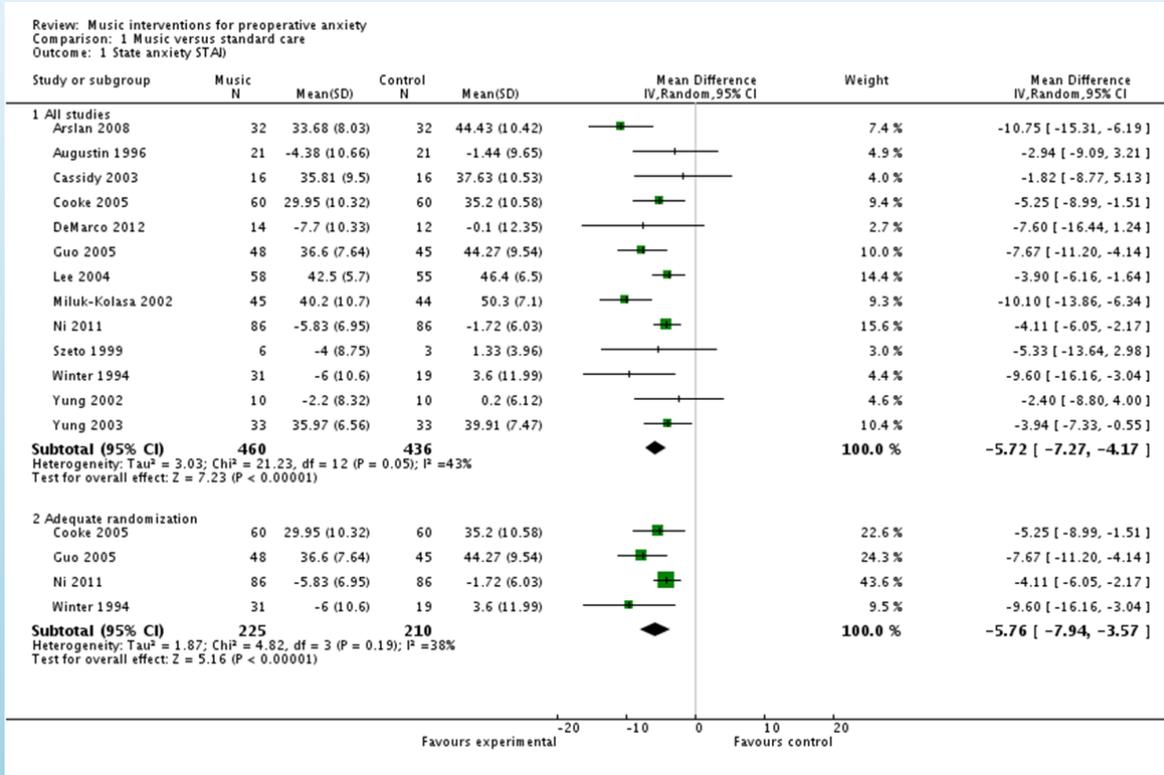
The therapy could last 30-40min in the pre-operative unit but it has been reported to be effective intraoperative as well with reductions in BIS index scores (Bae, Lim, Hur, & Lee, 2014).

(Hole, J., Hirsch, M., Ball, E., & Meads, C, 2015).

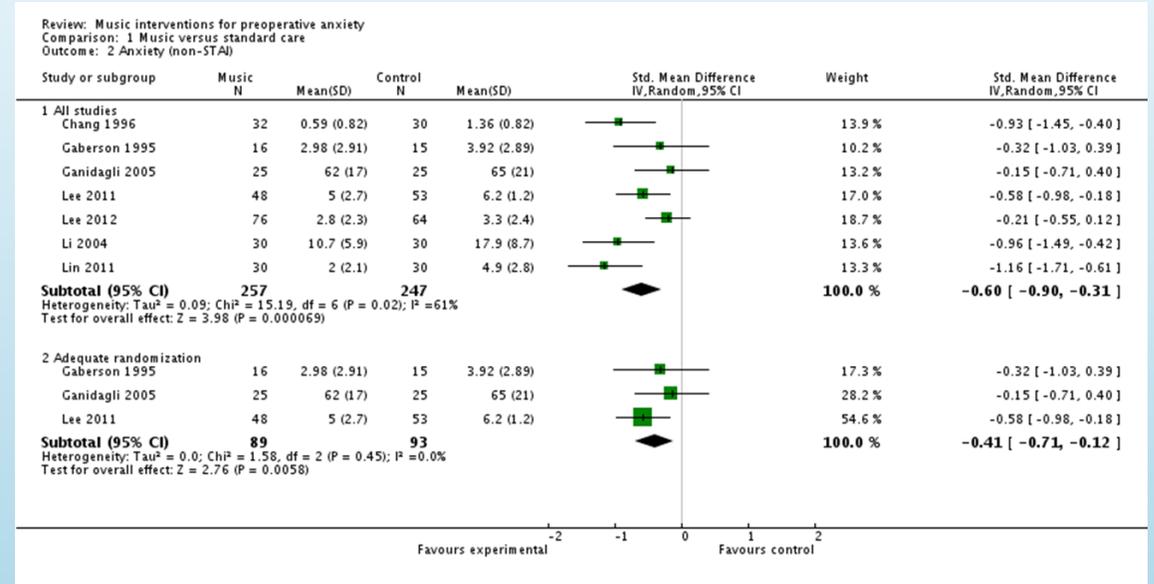
Evidence: Meta-analysis



State Anxiety (STAI)



Anxiety (non-STAI)



Cochrane Database of Systematic Reviews
 6 JUN 2013 DOI: 10.1002/14651858.CD006908.pub2

Evidence: Meta-analysis



- Music should be offered to help reduce preoperative anxiety, postoperative pain, increase patient satisfaction and possibly reduce recovery times.
- Outcomes to be measured
 - Anxiety
 - Pain
 - Patient Satisfaction CAHPS Survey Scores
 - Arrival in PACU to readiness to D/C time
 - Ready to D/C is defined as:
 - Phase II
 - Ready to get dressed. (stable)

Recommended Practice Change



- Population to begin trial: Breast Reconstruction
 - These patients experience high levels of stress R/T
 - Cancer diagnosis
 - Treatment options
 - Body image
 - Future prognosis
 - Potential mortality

(Binns-Turner, Wilson, Pryor, Boyd, & Prickett, 2011)

- Music (offered in Pre-op)

- 4-6 pre-recorded genres (Binns-Turner, Wilson, Pryor, Boyd, & Prickett, 2011)
- Soothing (60-80 beats/min) (Ni, Tsai, Lee, Kao, & Chen, 2012)
- Non-lyrical (Ni, Tsai, Lee, Kao, & Chen, 2012)
- Disposable noise blocking Ear buds or Headphones (Lee, Chao, Yiin, Chiang, & Chao, 2011)
- Low volume (<70dB) (Binns-Turner, Wilson, Pryor, Boyd, & Prickett, 2011)
- 5-30 minute session (Bradt, Dileo, & Shim, 2013; Hole, J., Hirsch, M., Ball, E., & Meads, C, 2015)



Implementation Plan



- Patient Satisfaction CAHPS Survey Scores
 - Collect from QI
- Data collected from the Epic EMR flowsheets
 - Pain
 - pain assessments from admit, or baseline, to D/C
 - PACU to readiness to D/C times
 - Case tracking
 - Anxiety (establish a 60 day baseline)
 - Document in Coping Group - Anxious
 - Anxiety groups added to flowsheets
 - Anxiety: feeling nervous – 1 to 10 scale
 - Developed and validated by Benotsch (r=0.77)
(Johnson, B., Raymond, S., & Goss, J., 2012)
 - Anxiety: Promote reduction - Music therapy

Data Collection



Flowsheets

File Add Row Add Group Add_LDAWound Add_Col Insert Col Show Device Data Last Filed Details Graph Go to Date Values By Refresh Legend Sidebar Pat Sum More

Brf Preop Checklist LDAs Wound POCT IO AD ASC Pre-Op Assessment Pre-Op PEDS Assessment Peri-Op Sedation ASC Intra Procedure ASC Pre-Op Assessment

Information Admission Data Upper Extremity Restr... Vitals PASS Pain Assessment Position/Safety Functional Status Cultural/Spiritual/Living Coping Abuse GYN Devices BRADEN SCALE Systems Assessment OTHER

Mode: Expanded View All

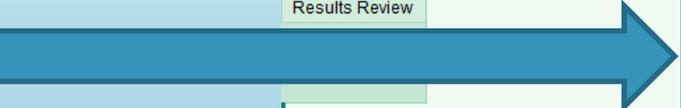
1m 5m 10m 15m 30m 1h 2h 4h 8h 24h Based On: 0700 Reset Now

Admission (Current) from 4/5/2017 in Interstate So...
2/28/17 5/18/17
1500 1400 1430

Pain Assessment
Pain Scale Type
POSITION/SAFETY
Bed Position
Patient Position
Siderails
Alarms
Recliner Position
Functional Status
Hearing Impairment
Visual Impairment
Cultural/Spiritual/Living
Cultural/Spiritual Practices
What Information Would Help Us
Living Arrangements
Potential Physical Barriers at
Coping
Patient Behavior Anxious
Abuse
Abuse Assessment
GYN
Pregnant?
Breastfeeding Status
Vaginal Bleeding
GYN
Rh Negative?
Devices
Devices/Supplies
Sequential Compression Device
Antiemetic Stocking
Braden Scale

05/18/17 1430
Patient Behavior
Anxious
Select Multiple Options: (F5)
Calm
Cooperative
Uncooperative
Appropriate for Age and Developmental Stage
Agitated
Angry
Anxious
Combatant
Consistent for Patient
Communicates Concerns
Delirious
Does not Verbalize
Euphoric
Flat Affect
Hostile
Hostless
Restless
Sedated
Somnolent
Talkative
Tearful
Unable to Assess
Verbally Abusive
Withdrawn
Comment (F6)

ONE RN PRE/POST (ASC) 2:59 PM



Data Collection - Document in Coping Row - Anxious



Flowsheets

File | Add Row | Add Group | Add_LDAWound | Add_Col | Insert Col | Hide Device Data | Last Filed | Details | Graph | Go to Date | Values By | Refresh | Legend | Sidebar Pat Sum | More

Wound | POCT | IO AD | ASC Pre-Op Assessment | Pre-Op PEDS Assessment | Peri-Op Sedation | ASC Intra Procedure | ASC PACU Flowsheet | Postc | ASC PACU Flowsheet

Information Mode: Expanded View All

Admission Data 1m 5m 10m 15m 30m 1h 2h 4h 8h 24h Based On: 0700 | Reset Now

Upper Extremity Restric... Admission (Current) from 4/5/2017 in Interstate So...

Vitals 2/28/17 5/18/17

PASS 1500 1400 1430

Pain Assessment GYN

Position/Safety Pregnant?

Functional Status Breastfeeding Status

Cultural/Spiritual/Living Vaginal Bleeding

Systems Assessment GYN

GYN Rh Negative?

Devices Devices

Devices/Supplies Devices/Supplies

Sequential Compression Device Sequential Compression Device

DISCHARGE DISCHARGE

After care instruction given to After care instruction given to

Verbalizes understanding Verbalizes understanding

Interpreter Interpreter

Accompanied by Accompanied by

Discharge Criteria Discharge Criteria

Disposition Disposition

Patient voided Patient voided

Transferred to Transferred to

Transferred Via Transferred Via

Handoff Communication Handoff Communication

Activity/Mobility Activity/Mobility

Weight Bearing Status Weight Bearing Status

OTHER OTHER

Anxiety (anxiety = feeling 7

Promote Anxiety Reduction/Resolution Promote Anxiety Reduction/Resolution

Complementary Therapy music therapy

Supportive Measures Supportive Measures

Family/Support System Care Family/Support System Care

Environmental Support Environmental Support

Sensory Stimulation Regulation Sensory Stimulation Regulation

05/18/17 1430

Anxiety (anxiety = feeling nervous)

Previous:

Select Single Option: (F5)

0=0
1=1
2=2
3=3
4=4
5=5
6=6
7=7
8=8
9=9
10=10

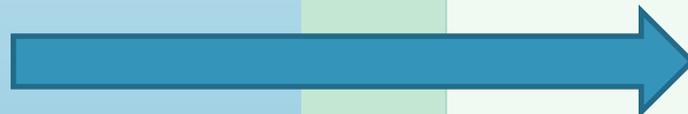
Comment (F6)

Customize

More

ONE RN PRE/POST (ASC) 2:35 PM

Developed and validated by Benotsch (r=0.77)
(Johnson, B., Raymond, S., & Goss, J., 2012)



Data Collection – Add Row - Anxiety: feeling Nervous



Flowsheets

File | Add Row | Add Group | Add LDA/Wound | Add Col | Insert Col | Show Device Data | Last Filed | Details | Graph | Go to Date | Values By | Refresh | Legend | Sidebar Pat Sum | More

Wound | POCT | IO AD | ASC Pre-Op Assessment | Pre-Op PEDS Assessment | Peri-Op Sedation | ASC Intra Procedure | ASC PACU Flowsheet | Postc | ASC Pre-Op Assessment

Information | Admission Data | Upper Extremity Restr... | Vitals | PASS | Pain Assessment | Position/Safety | Functional Status | Cultural/Spiritual/Living | Coping | Abuse | GYN | Devices | BRADEN SCALE | Systems Assessment | OTHER | Anxiety (Adult) | Promote Anxiety Re... | OTHER

05/18/17 1400

Anxiety (anxiety = feeling nervous)

7

Select Single Option: (F5)

0=0
1=1
2=2
3=3
4=4
5=5
6=6
7=7
8=8
9=9
10=10

Comment (F6)

ONE RN PRE/POST (ASC) 2:34 PM



Data Collection – Add Group - Anxiety: Promote Reduction



Show date? Show procedure/panel times?

Preop RN Prep Complete	0845	Now
Patient Ready for OR	0848	Now
Patient in Ancillary		Now
Patient Return to Pre Op		Now
Discharge From PreOp		Now
Post-op		
Arrival in PACU		Now
Discharge from PACU		Now
Arrival in PACU II		Now
Ready for Discharge from PACU II		Now
Discharge from PACU II		Now
Return to OR		Now

Patient's current unit: SYB-ASC [Change Unit](#)

Projected Times		
Start Time	End Time	Estimated End Time
0854	1055	

Data Collection



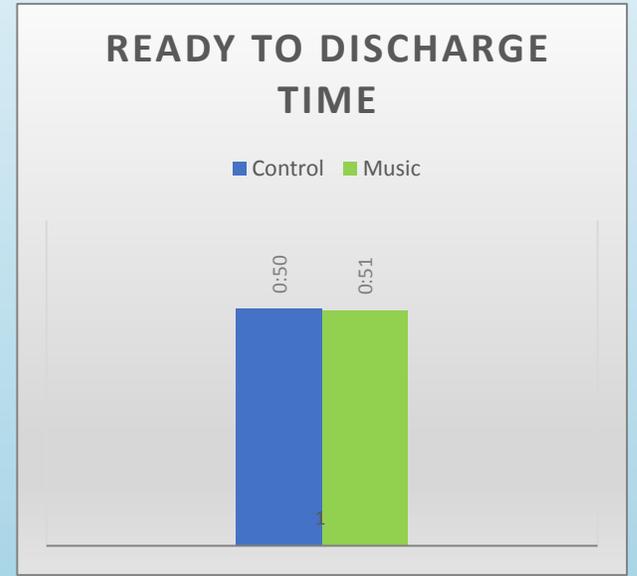
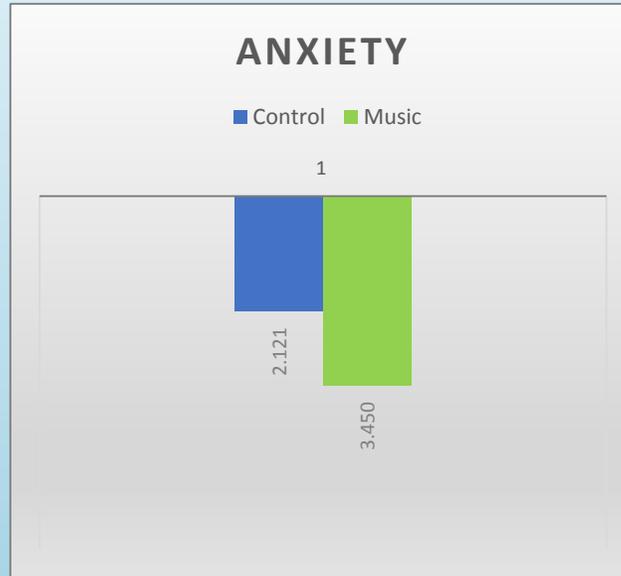
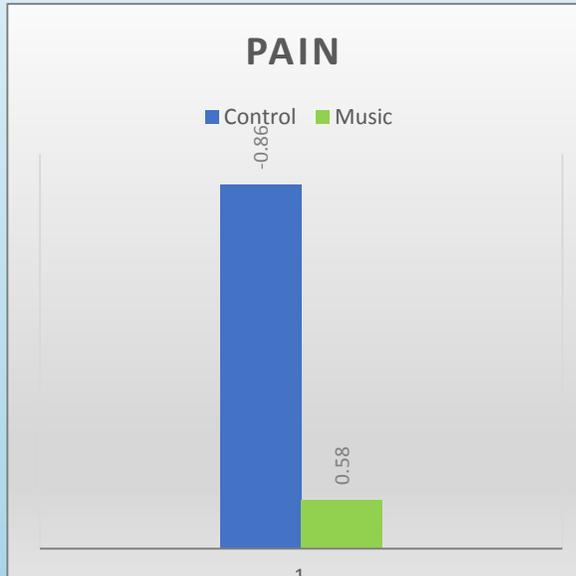
- Data was collected through chart review:
- Data was collected for 60 days for both Control and Intervention groups.
- Data collected was trended and graphed to identify potential differences in dependent variables.

Data Collection

- Preliminary data results suggested that 93% of the Intervention Group experienced a reduction of anxiety.

How much of a reduction?

Outcomes



Outcomes

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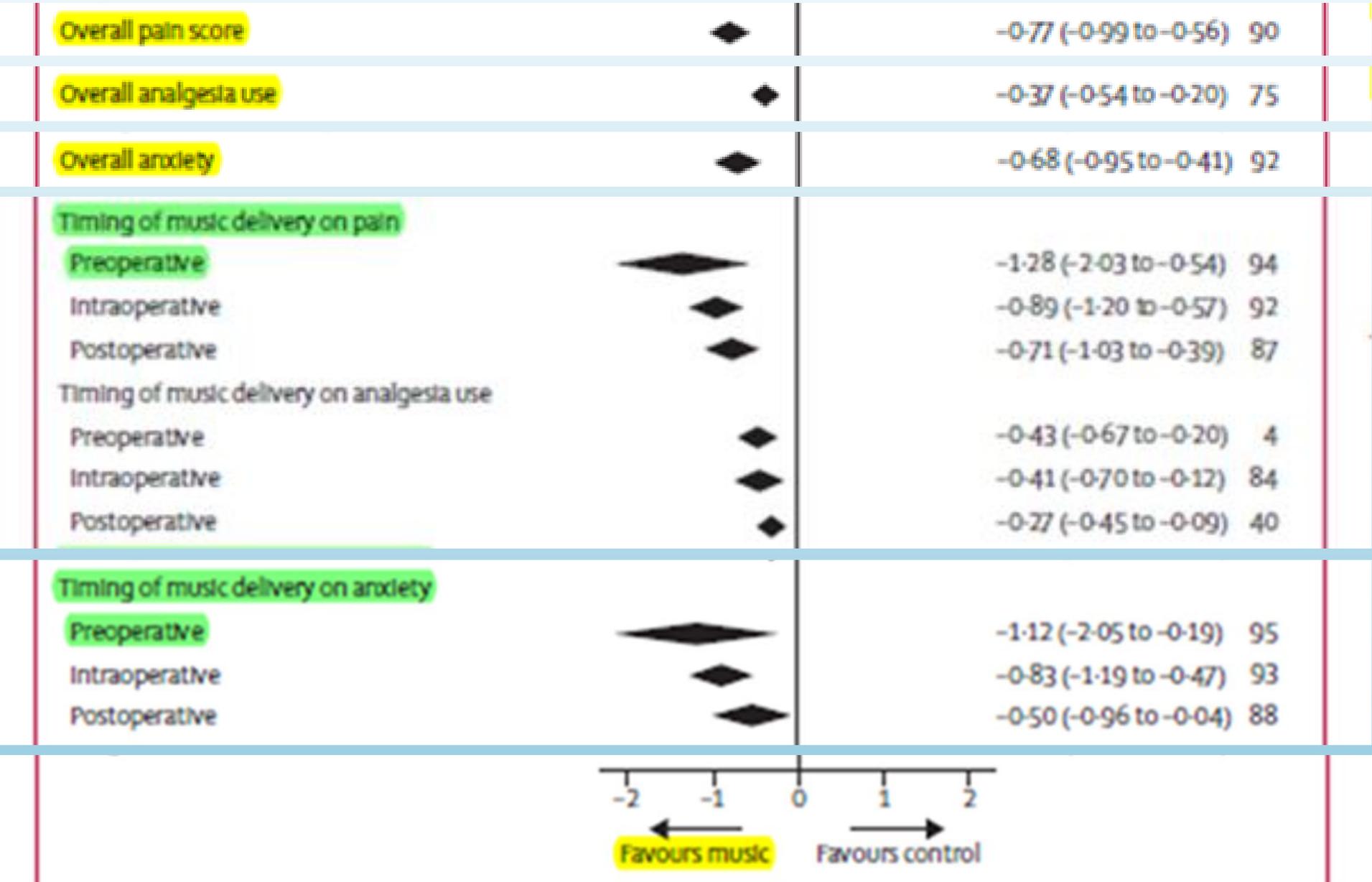
References



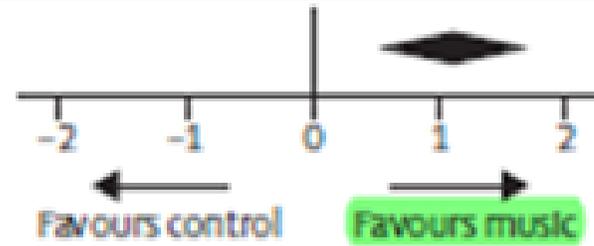
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References





Patient satisfaction



1.09 (0.51 to 1.68)

93





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Per Piece	\$1.40	\$1.35	\$1.31	\$1.24

