

# RANDOMIZED TRIAL OF HARP MUSIC THERAPY IN IVF-ET.

Vasiliki A Moragianni, MD, MS,<sup>1,2,3,4</sup> Jerry D Cohen, MPH,<sup>1</sup> James Hopkins, PhD,<sup>1</sup> Gloria Galante, MM,<sup>1</sup> Stephen G Somkuti, MD, PhD,<sup>1</sup> Annette Lee, MD,<sup>1</sup> Jay S Schinfeld, MD,<sup>1</sup> and Larry I Barmat, MD.<sup>1</sup>

<sup>1</sup>Department of Obstetrics & Gynecology, Division of Reproductive Endocrinology & Infertility, Abington Memorial Hospital, Abington, PA, USA.

<sup>2</sup>Department of Obstetrics & Gynecology, Division of Reproductive Endocrinology & Infertility, Beth Israel Deaconess Medical Center, Boston, MA, USA.

<sup>3</sup>Boston IVF, Waltham, MA, USA. <sup>4</sup>Harvard Medical School, Boston, MA, USA.

## Objective

To evaluate the clinical and psychological outcomes of Harp Music Therapy (HMT) during IVF-ET.

## Design

Prospective randomized trial.

## Materials and Methods

After obtaining IRB approval 126 patients undergoing IVF were enrolled in this trial between 06/2007 and 03/2009. Patients were randomized to control (C; n=59) or harp (H; n=67) groups using a random numbers table.

On the day of ET, both before and after the procedure, all patients had three vital signs (VS) measured: blood pressure (BP), respiratory rate (RR) and heart rate (HR), and completed a State Trait Anxiety Inventory (STAI) self-report anxiety assessment. All patients underwent IVF-ET following standard protocol, while H patients were additionally exposed to 20 minutes of live HMT during ET.

Main outcomes analyzed included VS, STAI scores, implantation rate (IR) and clinical pregnancy rate (CPR). Statistical analysis utilized the two-tailed Fisher's exact test and statistical significance was defined as a p-value of <0.05.

## Results

Patients had similar demographic characteristics and baseline FSH levels.

The results are summarized in Table 1.

## Conclusions

This is the first reported study of live HMT effects during IVF-ET. Our results demonstrate that HMT significantly decreases self-perceived anxiety levels in patients undergoing ET. A trend was also noted towards improved CPR and IR in the H group but statistical significance was not reached. These encouraging preliminary findings suggest that patients' response to music may play an important role in their emotional state and clinical outcome of IVF.

Variables	Before ET		P	After ET		P
	C (n=59)	H (n=67)		C (n=59)	H (n=67)	
HR	75.83±12.09	76.94±11.68	0.62	71.43±10.63	73.89±12.39	0.26
SBP	131.20±16.76	124.90±13.61	<b>0.03</b>	126.20±13.03	123.90±12.89	0.34
DBP	84.83±13.3	79.19±11.92	<b>0.02</b>	78.70±12.02	78.34±9.84	0.86
RR	15.40±2.59	15.46±2.57	0.89	14.06±2.56	13.94±3.03	0.82
STAI-State	39.78±10.30	40.73±9.76	0.59	33.69±10.88	29.42±8.41	<b>0.01</b>
A-State				-6.08±8.60	-11.30±8.87	<b>0.001</b>
STAI-Trait	33.88±7.60	37.24±9.86	<b>0.04</b>	33.10±8.26	33.42±10.57	0.85
A-Trait				-1.10±3.80	-3.03±4.15	<b>0.008</b>
IR (%)				25	33	0.26
CPR (%)				42	55	0.18

**Table 1. Outcomes of HMT during IVF-ET.**

HR, heart rate; SBP, systolic blood pressure; DBP, diastolic blood pressure; RR, respiratory rate; STAI, Spielberger Trait Anxiety Inventory; A, difference (after-before); IR, implantation rate; CPR, clinical pregnancy rate.

