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# EMDR versus Tetris: minimizing post-traumatic stress symptoms of parents in the Neonatal Unit

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## Intervention Research and Clinical Studies

### Problem

13% of live births in Northern Ireland are admitted to the Neonatal Unit (NNU). Their parents are at greater risk of developing post-traumatic stress symptoms due to:

- The hospitalisation of their baby
- Preterm birth
- A change to the anticipated start of their journey into parenthood
- Fear
- Lack of control
- Inability to protect their baby
- Concerns about their other children
- Financial worries

The impact of this is:

- Maternal and Paternal mental health issues
- Infant neurodevelopmental problems
- Bonding and attachment issues
- Socio-economic impact

Parental stress is part of the neonatal lived experience – yet this does not make it acceptable....



### Phase one

Each intervention will be carried out by parents when they feel anxious, such as when their baby is undergoing a procedure.

Tetris shall be played for at least 10 consecutive minutes once each day.

The Butterfly Hug / Safe Calm Place technique shall be performed for 30-40 seconds each time.

The effectiveness of the interventions shall be measured using online surveys completed by parents on day 1-2 in NNU, 4 weekly thereafter, and 6-8 weeks following discharge from the NNU.

Participants shall also keep a flashback diary to record the incidence of flashbacks.

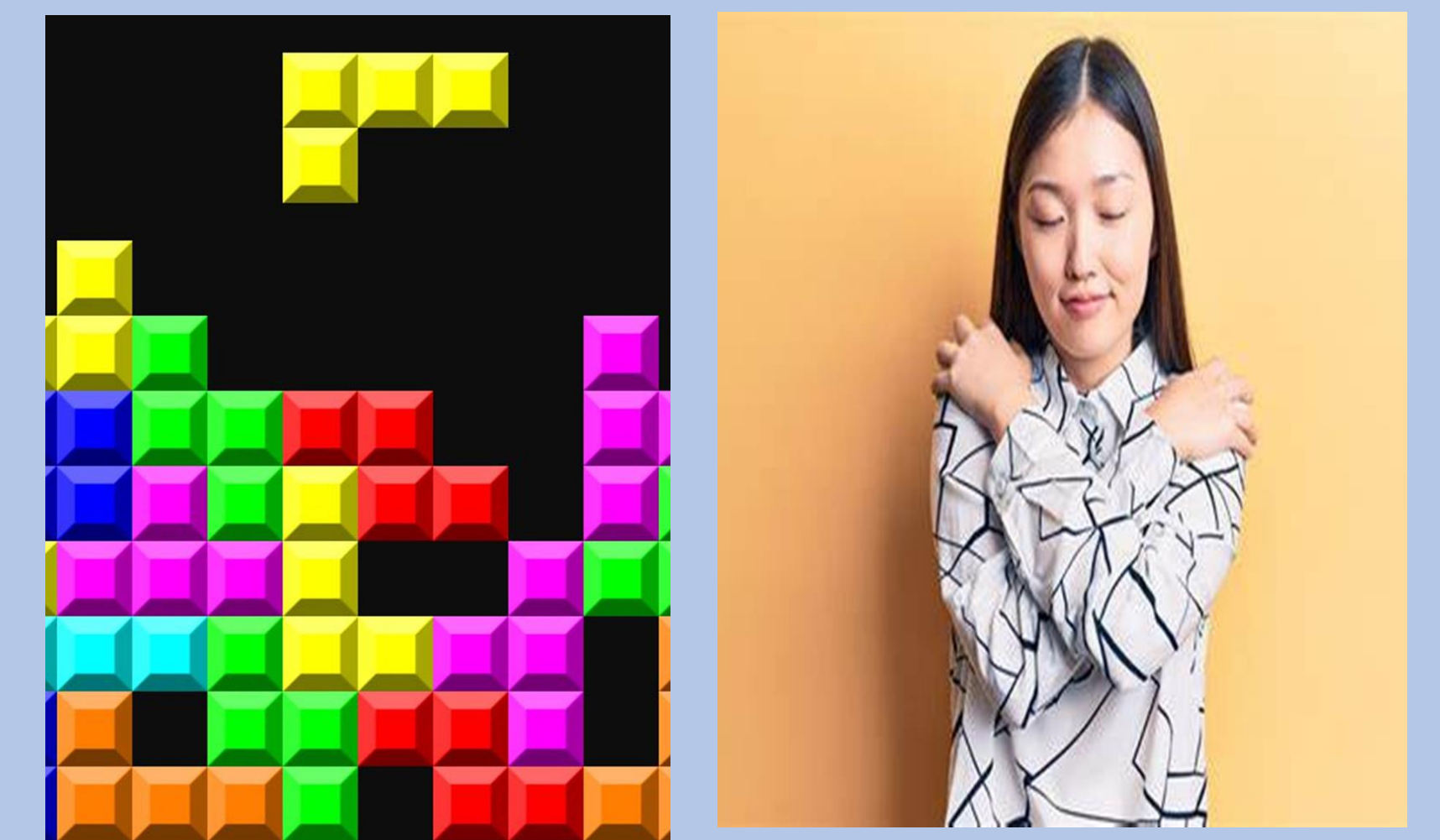
### Significance of the problem

It is thought that approximately 40% of mothers experience PTSS at 4-6 months after discharge from the NNU, with **60.4% continuing to experience PTSS at 18 months post-discharge**. Fathers have been the focus of more recent studies, indicating they exhibit **delayed signs of post-traumatic stress**.

### Theory of intervention impact

EMDR and Tetris are visuospatial tasks which compete for working memory while the traumatic memory is being stored in the brain.

- ✓ Accuracy of memory is unaffected
- ✓ Emotionality of memory is reduced
- ✓ Fewer intrusive memories or flashbacks
- ✓ Lower rates of post-traumatic stress symptoms observed



### Phase two

Focus groups shall be created for participants in each intervention group and the control group, as well as the neonatal unit staff to discuss the acceptability, feasibility and perceived effectiveness of the interventions.

### Memory consolidation

Memories are considered to be malleable for up to six hours after the traumatic event has occurred. By introducing an intervention such as Tetris or the Butterfly Hug / Safe Calm Place Technique, it is thought that the number of intrusive memories or flashbacks will reduce over the following days and weeks.

**Can either of these interventions help parents of preterm infants in the Neonatal Unit?**

### Population & Recruitment

This study shall focus on parents of infants in the NNU who were born at 33+6 weeks gestation or less.

This will be a feasibility study using sequential mixed methods. Thirty-two sets of parents will be recruited antenatally or within six hours of delivery. They will be randomly allocated to:

- control group who receive "care as usual"
- Tetris only
- Butterfly Hug / Safe Calm Place only
- Use of either or both as per participant choice

### Anticipated outcomes

EMDR and Tetris have both been found to be beneficial in reducing intrusive memories following a traumatic birth. Success has been noted in other clinical areas such as the Emergency Department. It is hoped that similar benefits will be observed in preterm parents in the NNU with either or both simple interventions.

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