# Incorporating Whare-Tapa-Whā in Road Safety - Maramataka

This abstract looks at how we can use Whare-Tapa-Whā (and our Te Tiriti obligations to protect Māori values) to aid in addressing Māori overrepresentation in road trauma.

1. What is the Opportunity?

Māori are significantly over-represented in road trauma:

“For 2013-2017 the average rate of DSIs per 100,000 population for all Māori men was

87.0; much higher than the average rate of 61.5 for all men. For non-Māori men the DSI rate is about average from 30 years onwards but for Māori men the DSI rate remains above average through to 64 years. For all Māori women the rate was 40.5; much higher than the average rate of 29.0 for all women. For Māori women the rate of DSI rate remains above average through to 59 years.” . [1]

To address this, it is important that we follow the lead that other sectors have taken, such as education and health, to live up to the principles of the Te Tiriti o Waitangi which are:

 Partnership – partnering with Māori to develop strategies for reducing Māori road trauma

 Protection –actively protecting Māori knowledge, interests, values and other taonga.

 Participation – to emphasise participation and success at all levels of reducing road trauma.

This abstract looks at the ‘Protection’ part of Te Tiriti and an example of including cultural practices in road safety. Our example is to study how Whare-Tapa-Whā and the Maramataka may affect road crashes as a way of storytelling road safety ideas . [2]

2. What is Whare-Tapa-Whā?

Te Whare-Tapa-Whā was developed by leading Māori health advocate and researcher Sir Mason Durie in

1984, to provide a Māori perspective on well-being. This model describes health as a wharenui/meeting house with four walls. These walls represent taha wairua/spiritual well-being, taha hinengaro/mental and emotional well-being, taha tinana/physical wellbeing and taha whānau/family and social well-being. Our connection with the whenua/land forms our foundation. The imbalance of an individuals Whare-Tapa- Whā can be detrimental to their holistic health and well-being.

3. What is Maramataka?

Maramataka is the Māori lunar calendar. The calendar starts with the re-emergence of the Matariki star cluster and is variable depending on the location in the country. In Māori tradition, Maramataka is used to identify the ideal and advantageous season for certain activities. For example, Marataka suggests not catching eels at full moon. This also corresponds to the time eels are less likely to be hunting as their prey are more likely to see them.

Maramataka also identifies periods of high, medium and low energy and suggests that there are times, in the lunar calendar, where we are more susceptible to road crashes [3].

4. What analysis are we doing?

WSP is carrying out analysis to see if there is correlation between the number of crashes and their period of energy in accordance with Whare-Tapa-Whā and the Maramataka. Maramataka is a regional based calendar, so we are using Tamaki Makaurau as an example study area (because of the larger crash numbers).

WSP has further carried out a literature review of international studies. This found multiple sources where lunar cycles have been studied for their effect on road crashes, suicide rates and hospital room visits. The theme of these studies is that there is statistical correlation between lunar phases and incident rates. However, as the studies are regional based, they have not been matched to Maramataka phases.

5. What further research opportunities are there?

To further examine the correlation of Maramataka requires specialist input from Māori scholars. There are also further opportunities to incorporate Whare-Tapa-Whā into other road safety studies. Another belief is that there are specific areas where road deaths are more suspectable because of the history of the site. There is an opportunity to identify and examine these to identify correlation with road crash locations.

It is important to note that we are examining correlation, rather than causation, at this early stage.

Should there be correlation, further study may be required to research this and other contributing factors which may cause this correlation.

6. Conclusion

The road safety industry has an opportunity to incorporate Whare-Tapa-Whā into road safety studies. This will work to protect Māori values, as obligated within Te Tiriti, and included Māori on the journey to reducing death and serious injuries on our roads.

Works Cited

[1] Waka Kotahi, He Pūrongo Whakahaumaru Huarahi Mō Ngā Iwi Māori., Wellington: NZTA, 2021. [2] SchoolNews NZ, Te Tiriti o Waitangi - living the values, Wellington: MOE, 2016.

[3] Te Papa, What is Maramataka | The Maori lunar calendar?, Wellington: Te Papa, 2021.