This study investigates L1 Taiwanese tonal attrition with a focus on Taiwanese tone sandhi. The Taiwanese tone system is sophisticated in that the acquisition of it requires not only the memorization of the underlying tones associated with each syllable but also syntactic knowledge and the tone sandhi rules. Thus, before a sentence is uttered in Taiwanese, syntactic parsing is necessary in order to assign appropriate tones, either the underlying tone or the sandhi tone, to each syllable. The tone sandhi rules in Taiwanese then determine the sandhi tone of a syllable based on its underlying tone.

For fluent Taiwanese speakers, the ability to apply tone sandhi is automatic and does not take strenuous effort. On the other hand, for attrited Taiwanese speakers, tone sandhi application might be arduous, given the complicated system Taiwanese tone sandhi involves. However, the investigation of L1 tonal attrition has not received any attention in attrition studies. Most work on L1 attrition revolves around the aspects of lexicon, syntax, and morphology. Little is known about how L1 Taiwanese speakers would attrite in tones after ceased or limited use of the language. The phenomena observed in the L1 Taiwanese tonal attrition will help provide more insights into the nature of L1 attrition.

The speech data of this study were collected from three groups of speakers— 9 attriters (28-40 years old), 4 younger bilingual speakers of Mandarin and Taiwanese (28-40 years old), and older non-attriters
(50-68 years old). All of the participants were recorded in two tasks—a movie excerpt retell and story telling. They also filled out a language background questionnaire. All of the data have been transcribed with relevant tone information and will be analyzed to verify hypotheses proposed in L1 attrition studies.