





Figure 1: Spectrograms showing voice quality before and after voice training. The top row shows the spectrogram before training, and the bottom row shows it after training. The x-axis represents frequency in kHz (0 to 20), and the y-axis represents time in seconds (0 to 2). The spectrograms illustrate the changes in the vocal spectrum, with the post-training spectrogram showing a more stable and consistent pattern across the frequency range.

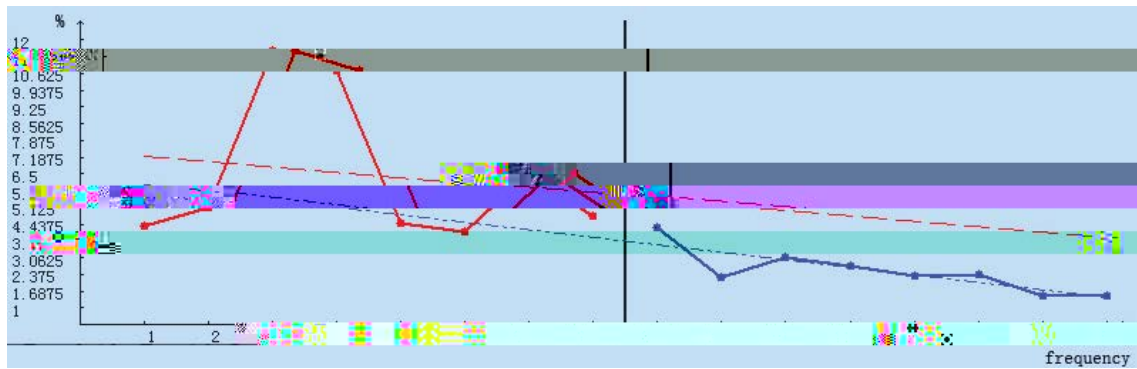
Figure 2: Spectrograms showing voice quality before and after voice training. The top row shows the spectrogram before training, and the bottom row shows it after training. The x-axis represents frequency in kHz (0 to 20), and the y-axis represents time in seconds (0 to 2). The spectrograms illustrate the changes in the vocal spectrum, with the post-training spectrogram showing a more stable and consistent pattern across the frequency range.

1	-3.28	-2.68
2	-3.96	-5.14
3	-2.09	-5.62
4	-1.83	-4.26
5	-2.44	-5.54
6	-2.75	-10.99
7	1.18	-15.17
8	-0.53	-15.83
M±SD	-1.96±1.63	-8.15±5.12
Br	0.397	0.851
P	0.006	

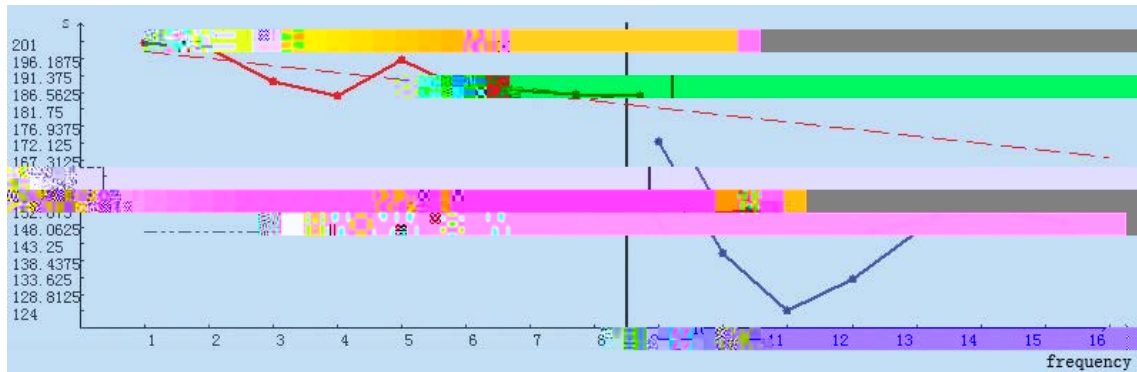
NNE (dB) variables before and after voice training.

1	1.2	0.55
2	1.33	0.45
3	1.96	0.22
4	1.64	0.35
5	1.56	0.28
6	1.52	0.29
7	1.95	0.14
8	1.57	0.15
M ± SD	1.59 ± 0.27	0.30 ± 0.14
Br	-0.025	0.462
P	0.000	

Variables for Jitter (%) before and after voice training.

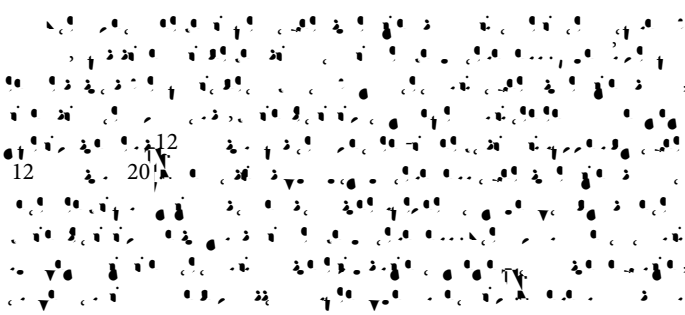


Trend in shimmer before and after voice training.



Trend of F0 before and after voice training.

	1	0	1	0
1	6	0		





1. Yan XF (2016) Effect of Liuzijue and Baduanjin on exercise tolerance in patients with chronic obstructive pulmonary disease in remission. *J Am Geriatr Soc* 63: 1420-1425.
 2. Yan XF (2016) Effect of Liuzijue and Baduanjin on exercise tolerance in patients with chronic heart failure. *Chin Meds Mod Distance Educ* 16:126-128.
 - 3.
-