CHAPTER VI

CONCLUSION

The purposes of this study were to compare, *in vitro*, the enamel surface fluoride concentration and the shear bond strength of composite resin bonded directly to fluorosis and non-fluorosis teeth. The linear correlations (Pearson's product moment) between the fluoride concentration and the shear bond strength were also evaluated.

1. Group 1 and group 2 showed lower surface fluoride concentration than group 3.

2. The comparisons of fluoride concentration among the three groups showed that there was no significant difference of fluoride concentration between group 1 and 2 ($p< 0.01$). There were significant differences of fluoride concentration between group 1 and 3 and also between group 2 and 3 ($p< 0.01$).

3. The comparisons of shear bond strength between group 1 (non-fluorosis) and group 2 (very mild to mild fluorosis) showed no significant difference ($p< 0.01$). When compared group 1 and 2 with group 3 (moderate to severe fluorosis), the significant differences were found ($p< 0.01$).

4. There was significantly negative correlations between the fluoride concentrations and the shear bond strengths of fluorosis samples in group 2 and 3 ($r= -0.408$, $p< 0.001$).

5. Most of samples generated adequate and clinically acceptable shear bond strength for orthodontic purposes. However, some samples especially in severe fluorosis teeth (score 4) produced too small shear bond strength in clinically acceptable.

6. Other factors such as, enamel surface irregularities, age of teeth, normal wear of the outer enamel surface might influence the results of this study, and this needed further investigations.