The present work has been limited to linear stress and deformation analyses in the torispherical headed pressure vessels with knuckle of variable thickness. The scope for further work on this technologically important problem exists. The suggestions are:

1) As the knuckle region experiences net compressive stress in the hoop direction, there is a possibility of failure by buckling, before material yielding. Such studies have been carried out on torispherical headed vessels of uniform thickness and such vessels are found to buckle with larger number of waves in the circumferential direction. Even though the increased knuckle may preclude buckling, such a study is desirable.

2) The stress levels in the knuckle region may exceed the linear elastic range of material in which case, a material nonlinear analysis will help to estimate the load carrying capacity more accurately.

3) Pressure vessels of layered construction, using fibre reinforced composites are in use in many applications. Analysis of such vessels becomes more complex due to the heterogeneity and anisotropic material behaviour. However, it is possible using layered shell finite elements.
4) In the present study, the variable thickness of knuckle is obtained by increasing thickness on the outer surface, keeping the inner surface smooth. This causes too much bulging in the knuckle region. On the other hand, if the thickness is increased on both sides of middle surface, a better geometrical shape and possibly reduced stresses may be obtained.