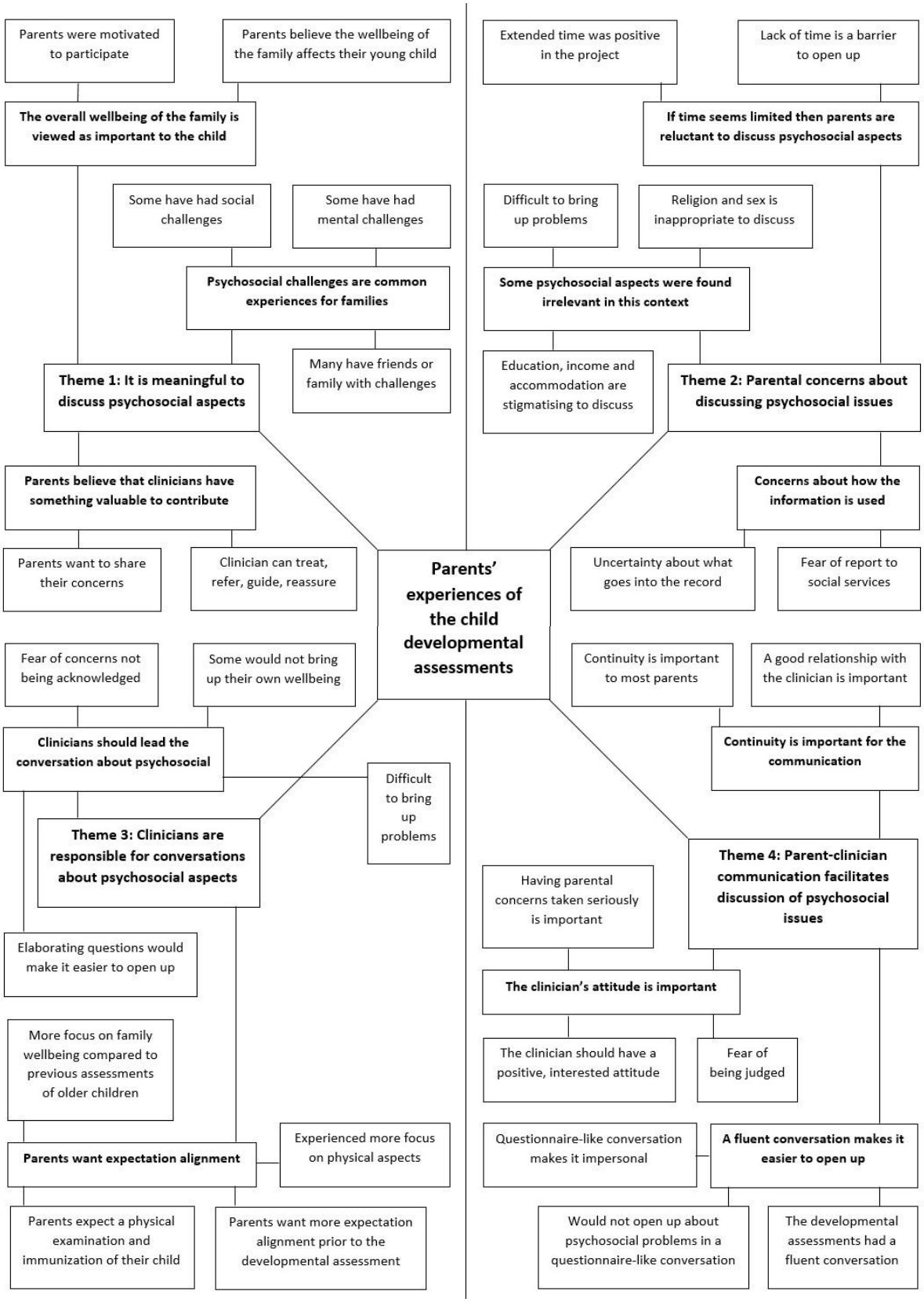Additional file 3: coding tree