## A Study of the Cognitive Behaviors of Primigravidas in

## Relation to Fetal Images Obtained by 3-D Sonography

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## 摘要

隨科技的進步,清晰、明顯的動態立體超音波(3D)檢查已廣泛被應用於產前 檢查,以作爲胎兒異常篩檢的有效工具。但反觀國內有關此方面的研究極少,尤 其是質性研究。本研究的目的在了解孕婦在 3D 檢查後對胎兒影像的認知行為及 其內容是否會隨懷孕週數增加而有所改變。本研究設計為臨床田野研究法。樣本 以立意取樣,收集臺北某醫學中心的 20 位初胎孕婦,於懷孕第 20、24、32、37 週時接受 3D 檢查。資料收集採半結構式錄音訪談,並配合 4-5 張 3D 檢查後的 照片,採行為過程記錄。在12小時內,資料採內容分析法,以歸納、分析及數 碼化,並將質性資料量化分析。結果發現,初胎孕婦對胎兒影像資料的認知行為, 可歸納為三種行為。確認行為出現頻率為最多;佔78.7%。其次為比較行為;佔 16.1%。再其次為評價行為;佔 5.2%。而初胎孕婦對胎兒關注的項目,以胎兒的 身體結構最多;佔60.9%,身體功能次之;佔19.2%,再其次為身體況狀;佔 12.2%,社會性質最少;佔7.7%。由本研究結果顯示,3D檢查不但可協助初胎 孕婦了解除經由胎動和其它感覺來建構胎兒影像外,更能正向引導孕婦了解胎兒 的身體結構及外表特徵,進而確認胎兒的身體功能。同時,孕婦在接受 3D 檢查 後,對胎兒影像亦呈現較正向的評價,且增進母性及母情行為的發展,對母子情 感的連結與懷孕過程的品質有提昇的效果。

## Abstract

With improvements in medical technology, the transparent and vivid motion of 3-D sonography has been widely applied in antenatal examination. However, little research has been done in Taiwan regarding 3-D sonography, and especially qualitative research. The purpose of this study was to understand whether or not the cognitive behaviors of primigravidas would change with increasing gestational age after viewing fetal sonographic images. The design was based on clinical field research. Purposive sampling was sued to collect data from 20 primigravidas who had 3-D sonography at their 20th, 24th, 32nd, and 37th, weeks of gestation in a medical center at Taipei area. Semi-structured interviews were conducted and recorded. During the interviews, the women viewed four to five 3-D sonographic photos their fetus. A process recording was done during the interview to understand these women's responses to seeing

3-D sonographic photos. Data were then summarized, analyzed, and digitized 12 hours after the interview using descriptive qualitative analysis. Three categories of cognitive behaviors were identified from the analysis: "Orienting behavior" occurred most frequently (78.7% of the behaviors). "Comparative behavior" accounted for 16.1% of the behaviors, while "assessment behavior" accounted for only 5.2% of the behaviors. This study also found that primigravidas responses to the fetal images could be categorized into four concerns. Participants were primarily concerned about the physical structure of the fetus (60.9%) of the participants. The next three concerns in order of frequency were fetal physical function (19.2% of the participants), physical condition (12.2% of the participants), and social quality (7.7% of the participants). In conclusion, this study revealed that viewing 3-D sonographic fetal images offered reassurance to primigravidas by helping them understand fetal development and activity, including fetal body structures, traditional fetal movements, and fetal physical function. After 3D sonography, primigravidas had positive impressions about fetal images. These positive may foster the development of the mother-fetal relationship and help improve the maternal-fetal emotional link and the quality of the pregnancy.