Happy Feet in Tomagwa: A Diabetic Foot Education Intervention

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BACKGROUND

- Pandemic Level
  - 38.7 million people have diabetes, 592 million by 2035
  - 4.9 million deaths in 2014 (1 death every 7 seconds)
- Prevalence: higher in rural than urban areas (17% vs 7.8%)
- Health Expenditure: $612 billion
- Leading cause of end-stage renal disease (globally)
- Most common cause of hospitalization
- Fourth leading cause of mortality
- Diabetes Peripheral Neuropathy: leading cause of foot ulcers
- 40%–70% of amputations (30 sec. a limb is lost to diabetes)
- Cost of amputation: $3 billion/year = $38,077/procedure

(International Diabetes Federation Report, 2014; Rural Healthy People 2020)

RESULTS: Demographics

- Gender: Male 50%, Female 50%
- Ethnicity: Hispanic 40%, Others 60%
- Marital Status: Married 40%, Single 30%, Widowed 20%
- Educational Attainment: HS 50%, < HS 50%
- Employment Status: Employed 40%, Retired 30%, Unemployed 20%
- Household: Live with spouse 50%, Live alone 50%

RESULTS: Paired SAMPLES t test

\[ t(25) = 7.952, p = .000 \text{ (two-tailed). } \eta^2 = .72 \]

- Significant increase on T2DM patient’s knowledge scores
- Pre-education intervention (M = 261.64, SD = 30.0)
- Post-education intervention (M = 327.96, SD = 22.0)
- t value = 7.952
- p < .000 (two-tailed)
- Mean difference = 66.32
- With 95% interval from -83.5333 to -49.1066

RESULTS: ETA SQUARED EFFECT SIZE

- Eta squared calculation using t-squared = 62.81

\[
\begin{align*}
\eta^2 &= \frac{T^2}{T^2 + (N-1)} \\
62.81 &= \frac{T^2}{T^2 + 24} \\
\eta^2 &= 0.72
\end{align*}
\]

(Almon, 2013)

SUMMARY

- The role of DNP in dissemination of EBP
- Meeting diabetic patients’ needs in a rural clinic
- Incorporation of foot education in routine care
- Implications to nurse leaders
- New knowledge to nursing literature
- Future research

RECOMMENDATIONS TO FUTURE RESEARCH

- Larger population
- Longer period of time
- One-to-one patient contact and education
- Health outcomes:
  - Emergency clinic visits
  - Hospitalizations
  - Development of foot ulcers
  - Amputations
  - Find gap between patient knowledge and nursing practice