

Online supplementary materials

Table 1. Comparison of the number of items of content validity results.

| Dimensions | Total Instrument version 1 | Total Instrument version 2 |
|---------------------------------|---------------------------------------|---------------------------------------|
| The nurse partnership dimension | 32 | 7 |
| Dialogue | 28 | 39 |
| Self-consciousness Pattern | 163 | 44 |
| Health Status | 18 | 10 |
| Total | 241 | 100 |

Table 2. The results of the Unidimensionality Test.

| Dimensions | Unidimensionality Test |
|--|---|
| The nurse partnership dimension | Chi square index ($p = 0.1902$), chi square test p value > 0.005 |
| The dialogue dimension: knowledge of Diabetes Mellitus | Chi square index ($p = 0.0000$). The RMSEA index shows that the model fit to the data. Estimate = 0.055, 90% C.I = 0.046 – 0.063, Probability $RMSEA \leq 0.05 = 0.171 (> 0.05)$ |

| | |
|--|--|
| The dialogue dimension: the development of diabetes mellitus conditions related to signs and symptoms of chronic complications | Chi square index ($p = 0.0007$). The RMSEA index shows that the model fit to the data. Estimate = 0.047 90% C.I = 0.029 – 0.065 |
| The dialogue dimension: the development of emotional conditions as a person with type 2 diabetes mellitus | Chi square index ($p = 0.0000$). The RMSEA index shows that the model fit to the data. Estimate = 0.071 90% C.I = 0.048 – 0.096 |
| Self-consciousness pattern dimension: knowledge of diabetes self-management targets to avoid chronic complications | Chi square index ($p = 0.0094$). The RMSEA index shows that the model fit to the data. Estimate = 0.049 90% C.I = 0.023 – 0.075 |
| Self-consciousness pattern dimension: health history patterns in the last 12 months | Probability RMSEA $\leq 0.05 = 0.066 (> 0.05)$ Chi square index ($p = 0.7022$), chi square test p value > 0.005 |
| Self-consciousness pattern dimension: self-consciousness to carry out diabetes self-management | H0 Scaling Correction Factor: 1.0031. The fit model is obtained from the output value of the H0 Scaling Correction Factor. If the value is still in the range of 1, it means the model fits the data. |
| Health status dimension | Chi square index ($p = 0.0000$). The RMSEA index shows that the model fit to the data Estimate = 0.062 90% C.I = 0.046 – 0.079 |
| | <hr/> <u>Probability RMSEA $\leq 0.05 = 0.112 (> 0.05)$</u> <hr/> |

Table 3. The result of item significance test.

| Dimensions | Item Significance Test | | | | |
|---|------------------------|----------|-------|----------|---------|
| | Item | Estimate | S.E | Est./S.E | p-Value |
| The nurse partnership dimension (K) | K1 | 0.736 | 0.052 | 14.066 | 0.000 |
| | K2 | 0.919 | 0.031 | 29.376 | 0.000 |
| | K3 | 0.949 | 0.025 | 37.326 | 0.000 |
| | K4 | 0.946 | 0.019 | 49.268 | 0.000 |
| | K5 | 0.803 | 0.052 | 15.328 | 0.000 |
| | K6 | 0.961 | 0.023 | 41.606 | 0.000 |
| | K7 | 0.920 | 0.029 | 31.340 | 0.000 |
| The dialogue dimension: knowledge of Diabetes Mellitus (DA) | DA1 | 0.544 | 0.049 | 11.159 | 0.000 |
| | DA2 | 0.145 | 0.074 | 1.962 | 0.050 |
| | DA3 | 0.398 | 0.056 | 7.083 | 0.000 |
| | DA4 | 0.309 | 0.077 | 4.002 | 0.000 |
| | DA5 | 0.665 | 0.050 | 13.249 | 0.000 |
| | DA6 | 0.153 | 0.068 | 2.252 | 0.024 |
| | DA7 | 0.783 | 0.059 | 13.165 | 0.000 |
| | DA8 | 0.950 | 0.016 | 60.823 | 0.000 |
| | DA9 | 0.905 | 0.022 | 40.987 | 0.000 |
| | DA10 | 0.903 | 0.027 | 33.833 | 0.000 |
| | DA11 | 0.893 | 0.027 | 33.631 | 0.000 |
| | DA12 | 0.606 | 0.055 | 10.997 | 0.000 |
| | DA13 | 0.222 | 0.067 | 3.326 | 0.001 |
| | DA14 | 0.917 | 0.035 | 26.245 | 0.000 |
| | DA15 | 0.974 | 0.028 | 34.866 | 0.000 |
| The dialogue dimension: the development of diabetes mellitus conditions related to signs and symptoms of chronic complications (DB) | DB1 | 0.762 | 0.041 | 18.566 | 0.000 |
| | DB2 | 0.542 | 0.056 | 9.632 | 0.000 |
| | DB3 | 0.570 | 0.052 | 10.918 | 0.000 |
| | DB4 | 0.621 | 0.048 | 12.912 | 0.000 |
| | DB5 | 0.692 | 0.046 | 14.972 | 0.000 |
| | DB6 | 0.684 | 0.042 | 16.326 | 0.000 |
| | DB7 | 0.704 | 0.044 | 16.087 | 0.000 |

| | | | | | |
|--|-------------------------------|-----------------|------------|-----------------|----------------|
| | DB14 | 0.500 | 0.053 | 9.482 | 0.000 |
| The dialogue dimension: the development of emotional conditions as a person with type 2 diabetes mellitus (DC) | DC1 | 0.867 | 0.029 | 29.467 | 0.000 |
| | DC2 | 0.868 | 0.029 | 30.097 | 0.000 |
| | DC3 | 0.748 | 0.042 | 17.605 | 0.000 |
| | DC4 | 0.719 | 0.040 | 17.793 | 0.000 |
| | DC5 | 0.612 | 0.044 | 13.954 | 0.000 |
| | DC6 | 0.686 | 0.060 | 11.397 | 0.000 |
| Self-consciousness pattern dimension: knowledge of diabetes | PA1 | 0.709 | 0.063 | 11.288 | 0.000 |
| | PA2 | 0.844 | 0.052 | 16.147 | 0.000 |
| | PA3 | 0.665 | 0.046 | 14.419 | 0.000 |
| Dimensions | Item Significance Test | | | | |
| Two-Tailed | | | | | |
| | Item | Estimate | S.E | Est./S.E | p-Value |
| self-management targets to avoid chronic complications (PA) | PA4 | 0.739 | 0.052 | 14.244 | 0.000 |
| | PA5 | 0.631 | 0.046 | 13.794 | 0.000 |
| | PA8 | 0.517 | 0.057 | 9.090 | 0.000 |
| Self-consciousness pattern dimension: health history patterns in the last 12 months (PB) | PB3 | 0.422 | 0.064 | 6.638 | 0.000 |
| | PB4 | 0.418 | 0.062 | 6.734 | 0.000 |
| | PB5 | 0.866 | 0.031 | 27.520 | 0.000 |
| | PB6 | 0.928 | 0.028 | 32.884 | 0.000 |
| | PB7 | 0.808 | 0.037 | 22.120 | 0.000 |
| Self-consciousness pattern dimension: self- consciousness to carry out diabetes self- management (PC) | PC2 | 0.405 | 0.062 | 6.532 | 0.000 |
| | PC3 | 0.528 | 0.069 | 7.596 | 0.000 |
| | PC4 | 0.644 | 0.069 | 9.346 | 0.000 |
| | PC5 | 0.587 | 0.071 | 8.314 | 0.000 |
| | PC6 | 0.294 | 0.056 | 5.241 | 0.000 |
| | PC7 | 0.317 | 0.055 | 5.731 | 0.000 |
| | PC8 | 0.662 | 0.068 | 9.775 | 0.000 |
| | PC9 | 0.529 | 0.061 | 8.659 | 0.000 |
| | PC10 | 0.691 | 0.058 | 11.863 | 0.000 |
| | PC11 | 0.320 | 0.059 | 5.463 | 0.000 |
| | PC12 | 0.497 | 0.062 | 7.974 | 0.000 |
| | PC13 | 0.286 | 0.060 | 4.796 | 0.000 |

| | | | | | |
|--------------------------------|------|-------|-------|---------|-------|
| | PC14 | 0.313 | 0.060 | 5.233 | 0.000 |
| | PC16 | 0.647 | 0.069 | 9.398 | 0.000 |
| | PC17 | 0.629 | 0.063 | 9.972 | 0.000 |
| | PC18 | 0.994 | 0.007 | 151.336 | 0.000 |
| | PC19 | 0.967 | 0.013 | 72.790 | 0.000 |
| | PC20 | 0.433 | 0.063 | 6.869 | 0.000 |
| | PC21 | 0.367 | 0.054 | 6.792 | 0.000 |
| | PC24 | 0.329 | 0.066 | 4.966 | 0.000 |
| | PC27 | 0.377 | 0.056 | 6.692 | 0.000 |
| | PC28 | 0.441 | 0.058 | 7.596 | 0.000 |
| Health status dimension (S) | S1 | 0.794 | 0.030 | 26.565 | 0.000 |
| | S2 | 0.842 | 0.031 | 27.192 | 0.000 |
| | S3 | 0.794 | 0.029 | 27.015 | 0.000 |
| | S4 | 0.873 | 0.024 | 36.542 | 0.000 |
| | S5 | 0.823 | 0.031 | 26.842 | 0.000 |
| | S6 | 0.878 | 0.028 | 31.640 | 0.000 |
| | S7 | 0.730 | 0.053 | 13.887 | 0.000 |
| | S10 | 0.651 | 0.083 | 7.837 | 0.000 |

Table 4. The result of the reliability test.

| Dimensions | Parallel Test | Item | Factor Loading Two-Tailed | | | |
|---|---|------|---------------------------|-------|----------|---------|
| | | | Estimate | S.E | Est./S.E | p-Value |
| The nurse partnership dimension (K) | RMSEA Index Estimate: 0.05890 Percent CI: 0.042– 0.075 Probability RMSEA ≤ 0.05: 0.196 (p value > 0.05) | K1 | 0.908 | 0.014 | 63.248 | 0.000 |
| | | K2 | 0.908 | 0.014 | 63.248 | 0.000 |
| | | K3 | 0.908 | 0.014 | 63.248 | 0.000 |
| | | K4 | 0.908 | 0.014 | 63.248 | 0.000 |
| | | K5 | 0.908 | 0.014 | 63.248 | 0.000 |
| | | K6 | 0.908 | 0.014 | 63.248 | 0.000 |
| | | K7 | 0.908 | 0.014 | 63.248 | 0.000 |
| The dialogue dimension: knowledge of Diabetes Mellitus (DA) | H0 Scaling Correction Factor: 1.0554. The value is still in the range of 1 (meaning the | DA1 | 0.516 | 0.030 | 17.155 | 0,000 |
| | | DA2 | 0.516 | 0.030 | 17.155 | 0,050 |
| | | DA3 | 0.516 | 0.030 | 17.155 | 0,000 |
| | | DA4 | 0.516 | 0.030 | 17.155 | 0,000 |
| | | DA5 | 0.516 | 0.030 | 17.155 | 0,000 |
| | | DA6 | 0.516 | 0.030 | 17.155 | 0,024 |
| | | DA7 | 0.516 | 0.030 | 17.155 | 0,000 |

| Dimensions | Parallel Test | Factor Loading | | | | |
|---|---|----------------|----------|-------|----------|---------|
| | | Item | Estimate | S.E | Est./S.E | p-Value |
| | model fits the data). | DA8 | 0.516 | 0.030 | 17.155 | 0,000 |
| | | DA9 | 0.516 | 0.030 | 17.155 | 0,000 |
| | | DA10 | 0.516 | 0.030 | 17.155 | 0,000 |
| | | DA11 | 0.516 | 0.030 | 17.155 | 0,000 |
| | | DA12 | 0.516 | 0.030 | 17.155 | 0,000 |
| | | DA13 | 0.516 | 0.030 | 17.155 | 0,001 |
| | | DA14 | 0.516 | 0.030 | 17.155 | 0,000 |
| | | DA15 | 0.516 | 0.030 | 17.155 | 0,000 |
| The dialogue dimension: the development of diabetes mellitus conditions related to signs and symptoms of chronic complications (DB) | Estimate 0.054 90 Percent C.I: 0.039-0.069 Probability RMSEA ≤ 0.05: 0.309 (p- Value > 0.05) | DB1 | 0.643 | 0.018 | 34.931 | 0.000 |
| | | DB2 | 0.643 | 0.018 | 34.931 | 0.000 |
| | | DB3 | 0.643 | 0.018 | 34.931 | 0.000 |
| | | DB4 | 0.643 | 0.018 | 34.931 | 0.000 |
| | | DB5 | 0.643 | 0.018 | 34.931 | 0.000 |
| | | DB6 | 0.643 | 0.018 | 34.931 | 0.000 |
| | | DB7 | 0.643 | 0.018 | 34.931 | 0.000 |
| | | DB14 | 0.643 | 0.018 | 34.931 | 0.000 |
| The dialogue dimension: the development of emotional conditions as a person with type 2 diabetes mellitus (DC) | The DC Parallel Model is obtained using a Bayesian (Bayes) Estimator. Apart from this estimator, it is difficult to obtain a suitable parallel model. From a scoring perspective, this parallel model item can be added directly, so it | DC1 | 0.757 | | | 0.000 |
| | | DC2 | 0.757 | | | 0.000 |
| | | DC3 | 0.757 | | | 0.000 |
| | | DC4 | 0.757 | | | 0.000 |
| | | DC5 | 0.757 | | | 0.000 |
| | | DC6 | 0.757 | | | 0.000 |
| | | | | | | |

| Dimensions | Parallel Test | Factor Loading | | | | |
|---|--|----------------|----------|-------|----------|---------|
| | | Item | Estimate | S.E | Est./S.E | p-Value |
| | does not require special skills related to confirmatory factor analysis. | | | | | |
| | Posterior One-Tailed (95% CI) | | | | | |
| | SD: 0.018 | | | | | |
| | Lower 2.5% Significance: 0.720 | | | | | |
| | Upper: 2.5% Significance: 0.790 | | | | | |
| Self-consciousness pattern dimension: knowledge of diabetes self-management targets to avoid chronic complications (PA) | Estimate: 0.062 90% C.I (0.042-0.082). Probability RMSEA ≤ 0.05: 0.152 (p-value > 0.05) | PA1 | 0.687 | 0.026 | 26.861 | 0.000 |
| | | PA2 | 0.687 | 0.026 | 26.861 | 0.000 |
| | | PA3 | 0.687 | 0.026 | 26.861 | 0.000 |
| | | PA4 | 0.687 | 0.026 | 26.861 | 0.000 |
| | | PA5 | 0.687 | 0.026 | 26.861 | 0.000 |
| Self-consciousness pattern dimensions: health history patterns in the last 12 months (PB) | H0 Scaling Correction Factor 1.0019 | PB3 | 0.844 | 0.015 | 56.718 | 0.000 |
| | | PB4 | 0.844 | 0.015 | 56.718 | 0.000 |
| | | PB5 | 0.844 | 0.015 | 56.718 | 0.000 |
| | | PB6 | 0.844 | 0.015 | 56.718 | 0.000 |
| | | PB7 | 0.844 | 0.015 | 56.718 | 0.000 |
| Self-consciousness pattern dimensions: self-consciousness to carry out diabetes self-management (PC) | H0 Scaling Correction Factor 1.0576 | PC2 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC3 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC4 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC5 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC6 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC7 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC8 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC9 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC10 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC11 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC12 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC13 | 0.524 | 0.028 | 18.484 | 0.000 |

| Dimensions | Parallel Test | Factor Loading | | | | |
|---------------|---------------|----------------|----------|-------|----------|---------|
| | | Item | Estimate | S.E | Est./S.E | p-Value |
| | | PC14 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC16 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC17 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC18 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC19 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC20 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC21 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC24 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC27 | 0.524 | 0.028 | 18.484 | 0.000 |
| | | PC28 | 0.524 | 0.028 | 18.484 | 0.000 |
| Health status | Estimate | S1 | 0.821 | 0.014 | 57.966 | 0.000 |
| dimension (S) | 0.054 | S2 | 0.821 | 0.014 | 57.966 | 0.000 |
| | 90 Percent | S3 | 0.821 | 0.014 | 57.966 | 0.000 |
| | C.I. | S4 | 0.821 | 0.014 | 57.966 | 0.000 |
| | 0.039 – 0.069 | S5 | 0.821 | 0.014 | 57.966 | 0.000 |
| | Probability | S6 | 0.821 | 0.014 | 57.966 | 0.000 |
| | RMSEA ≤ | S7 | 0.821 | 0.014 | 57.966 | 0.000 |
| | 0.05: | S10 | 0.821 | 0.014 | 57.966 | 0.000 |
| | 0.310 (p- | | | | | |
| | value > | | | | | |
| | 0.05) | | | | | |

