Cost-Related Maladaptive Coping and Diabetes Distress among Adults with Uncontrolled Diabetes

Chunyu Wang, BS, MS, RN[1]; Minal R. Patel, PhD, MPH[2]; Dante Anthony Tolentino, PhD, RN[1]
1 University of California Los Angeles, School of Nursing
2 University of Michigan, School of Public Health

Background & Purpose

- Diabetes affects 34.1 million U.S. adults, with financial well-being playing a crucial role in physical and mental health
- **Diabetes distress** includes stress, worry, frustration, and feeling overwhelmed by diabetes management
- Persistent diabetes distress leads to poor self-care, low medication adherence, poor glycemic control, and increased morbidity/mortality
- Maladaptive coping refers to ineffective or harmful strategies used to manage stress, such as skipping medications, delaying prescriptions, reducing insulin doses, or avoiding medical care due to financial constraints.
- A gap exists in understanding the association between cost-related maladaptive coping behaviors and diabetes distress
- **Purpose: Identify the association between cost-related maladaptive coping behaviors and diabetes distress**

Methods

- **Study Design**: Cross-sectional analysis using secondary data from a two-arm randomized controlled trial (RCT)
- **Sample**: 600 adults with poorly controlled diabetes, recruited between 2019–2021 via in-person or telephone surveys
- **Measures**:
  - **Cost-related maladaptive coping**: Participants were asked if financial burden led them to take less medication or skip doses or delay prescriptions, or choose providers based on cost.
  - **Diabetes distress**: the Diabetes Distress Scale.
  - **Covariates**: Gender, age, race/ethnicity, and income.
- **Analysis**: Descriptive, bivariate statistics, and adjusted multivariable linear regression

Results

Variables	Mean (SD) or n (%)
Diabetes distress *M(SD)*	3.76 (1.38)
No	151 (25.2)
Moderate	71 (11.9)
High	377 (62.9)
Age, years *M(SD)*	53.44 (13.05)
Years with diabetes *M(SD)*	19.34 (11.17)
Comorbidity *M(SD)*	4.27 (2.37)
Gender *n(%)*	
Female	333 (55.8)
Male	264 (44.2)
Race *n(%)*	
White	440 (73.6)
Other races	158 (26.4)
Education level *n(%)*	
High school or less	80 (13.4)
Vocational or trade school	34 (5.7)
College or above	485 (81.0)
Income per year *n(%)*	
<$50,000	297 (50.2)
$50,000-$100,000	m185 (31.3)
>$100,000	110 (18.6)
Maladaptive coping *n(%)*	
Yes	233 (38.9)
No	366 (61.1)

Table 1. Characteristics of the study sample

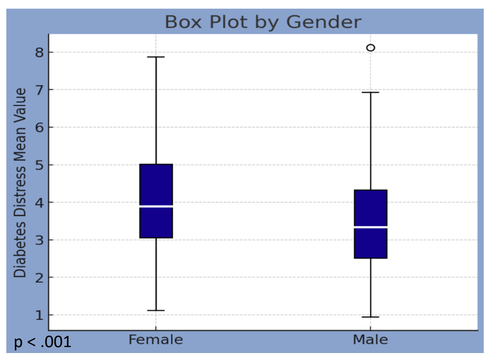

Figure 1. Diabetes distress by gender

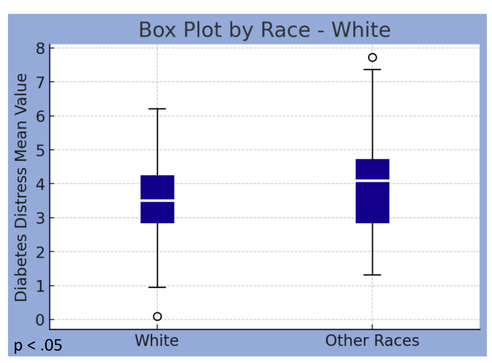

Figure 2. Diabetes distress by race (White)

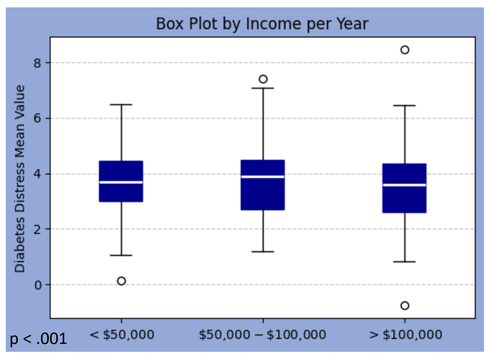

Figure 3. Diabetes distress by income per year

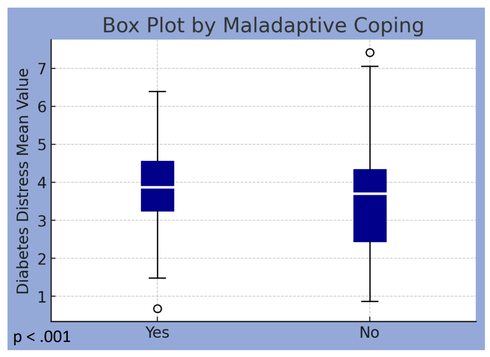

Figure 4. Diabetes distress by maladaptive coping

Variables	1	2	3
1.Diabetes distress	-		
2.Years with diabetes	.05	-	
3.Comorbidity	.05	.12*	-
4. Age	- .16*	.19*	.31*

Note: *p < .001

Table 2. Correlations of observed variables

Diabetes distress	B	95%CI for B		SE B	β	R^2	ΔR^2
		LL	UL				
Model						.09***	.08***
Constant	4.79***	4.26	5.32	.27			
Age	- .01**	- .02	- .01	.00	- .13		
Gender-male[a]	- .50***	- .72	- .28	.11	- .18		
Income- 50K-100K[b]	- .06	- .30	.19	.13	- .02		
Income- >100K[b]	- .27	- .57	.03	.15	- .08		
Race-White[c]	- .22	- .47	.03	.13	- .07		
Maladaptive coping[d]	.37**	.14	.59	.11	.13		

Note. Model = "Enter" method in SPSS statistics;
B = unstandardized regression coefficient
CI = confidence interval; LL = lower limit;
UL = upper limit;
SEB = standard error of the coefficient;
β = standardized coefficient;
R2 = coefficient of determination;
ΔR2 = adjusted R2.
***p < .001, **p < .05,
Reference categories:
a: Gender: female
b: income per year: < $50,000
c: Race: other races
d: No maladaptive coping

Table 3. Multiple linear regression results for diabetes distress

Conclusions & Implications

- Cost-related maladaptive coping significantly contributes to diabetes distress
- Addressing cost-related barriers is essential for better mental well-being and diabetes management
- **Limitations**: Self-reported data, cross-sectional design, and potential lack of generalizability
- Future research should validate findings across diverse populations and explore other factors influencing diabetes distress