



## Couple Engagement in Shared Glycemic Control Activities: The Role of Perceived Warmth

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### ABSTRACT

The presence of diabetes in a relationship requires significant adjustment both in health practices and in psychosocial adaptation. This study examines the relationship between a diabetic partner's perceived warmth from their partner and couple engagement in shared glycemic control activities (SGCA) such as exercise and diet. We hypothesize individuals' perception of their partner's warmth can significantly predict their engagement in shared glycemic control activities, which will further influence dietary adherence.

### METHODS

Ninety-two couples in which one spouse had been diagnosed with type 2 DM were examined in the current study. Diabetic spouses (55% female, Mage=53.30 years, SD=13.59, 50.6% White, 15.3% African-American, 20% Latino, 8.2% Asian, 1.2% Native American 3.6% Middle Eastern, 1.2% West Indian) and nondiabetic spouses (Mage=53.03 years, SD=13.45, ethnicity: 53.6% white, 15.5% African-American, 19% Latino, 6% Asian, 1.2% Native American 4.8% Middle Eastern) reported on their length of marriage and their perceptions of each other's warmth. The partner reported on engagement in shared glycemic control activities (SGSA) and the patient on dietary their own adherence. Perceived warmth was assessed using the Warmth (Mathews et al., 1996;  $\alpha=.96$  for both partners). SGSA was measured using the Partnering Support Scale (Houston-Barrett et al., 2012;  $\alpha=.93$ ). Patient diet adherence was assessed using the Diabetes Care Profile subscale (Michigan Diabetes Research and Training Center, 1998;  $\alpha=.80$ ). All procedures were approved by the University's IRB.

### RESULTS

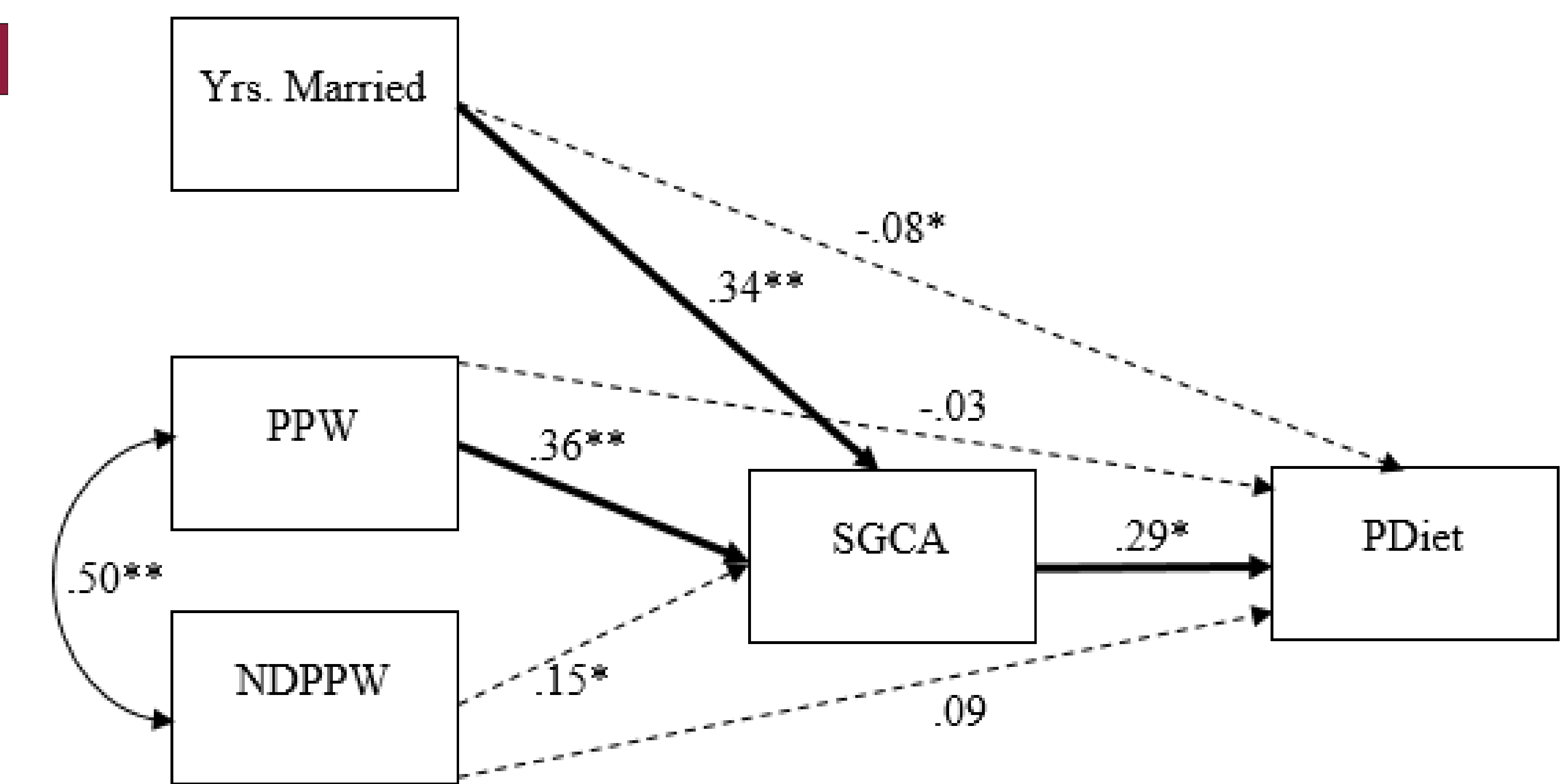
SEM was conducted to examine whether partners' perceived warmth of the patient predicted the couple's engagement in shared glycemic control activities. Results demonstrate that after accounting for variance shared with the patient, partners' perceptions of the patient's warmth did not significantly predict the couple's engagement in SGCA. However, patients' perceptions of their partner's warmth significantly predicted engagement in SGCA while accounting for variance shared with the partner. Follow-up mediation analysis revealed a significant indirect effect from patients' perceptions of their partner's warmth to patients' diet adherence via engagement in SGCA ( $\beta = .106$ ,  $p < .05$ ; 95% CI [.010, .259]). The model demonstrated a good fit:  $\chi^2(2) = .721$ ,  $p = .685$ ; CFI = 1.00; TLI = 1.00; SRMR = .013.

**Table 1**

Means, Standard deviations (SD) and correlations among study variables

Variable	M ± SD	1	2	3	4	5
1. SGCA	27.26 ± 10.56	-				
2. PPW	47.49 ± 12.76	.46**	-			
3. NDPPW	47.4 ± 11.59	.30**	.50**	-		
4. PDiet	7.53 ± 3.09	.26**	.14	.17*	-	
5. Yrs Married	25.15 ± 15.93	.35**	.04	-.06	.02	-

Note. \* $p < .05$ . \*\* $p < .01$ . SGCA = Engagement in Shared Glycemic Control Activities. PPW = Patient Perceived Warmth. NDPPW = Non-Diabetic Partner Perceived Warmth. PDiet = Patient Diet Adherence. Yrs Married = Number of Years Married.



**Figure 1.** \* $p < .05$ . \*\* $p < .01$ . Bold lines depict significant relationships and dashed lines represent non-significant relationships. Yrs Married = Number of Years Married. PPW = Patient Perceived Warmth. NDPPW = Non-Diabetic Partner Perceived Warmth. SGCA = Engagement in Shared Glycemic Control Activities. PDiet = Patient Diet Adherence.

### DISCUSSION

Findings demonstrate that patient's perceptions of their partner's warmth significantly predicted engagement in shared glycemic control activities (SGCA) and SGCA behaviors further predicted diet adherence. These findings highlight the important role couple perceptions may play in diabetes management. Taking into account dyadic processes and perceptions such as warmth and how they support SGCA may be an important addition to traditional self-management recommendations such as encouraging weight loss, diet, exercise, and medication adherence. Findings also emphasize the potential benefit of conceptualizing diabetes management from a systems/relational perspective as well as the use of family-based approaches for diabetes management.