

**JAZZ IT UP**  
WITH INNOVATION  
AND ENGAGEMENT

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**Measuring Family Resilience in Families with an Adult with Diabetes**

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**Background**

- Diabetes now at epidemic proportions in US, over 29 million Americans have Diabetes ...how many family members are impacted?????????
- Family is known to have strong influence on diabetes care and outcomes of those with diabetes through self management tasks and perception of disease (White, et al., 2009; Keough, et al., 2011)

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**John and Joe**

- 2 men with similar backgrounds
- 2 families with different perspectives
- Why? How? What can we do?

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## Background

- Little research conducted in population of families of adults with diabetes
- Very little research conducted on family resilience and diabetes

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## Family and Diabetes

Family members of those with diabetes report:

- \*Low levels of knowledge and support
- \*Low levels of well-being
- \*High levels of emotional distress (White, et al, 2009)
- \* Resilience leads to adaptation to illness such as diabetes (Bradshaw, Richardson, Kulkarni, 2007)

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## Family Resilience

Defined as the ability of the family:

- to adapt and remain healthy despite major stressor (Black & Lobo, 2008)
- to positively respond to crisis (McCubbin & McCubbin, 1989)
- to use strengths to turn a crisis into a positive experience and grow as a result (Walsh, 2003)
- "bounce forward" (Walsh, 2006)

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## Family Resilience

- Strengths based theory (Walsh, 2003, 2006; Patterson, 2002)
- Results in high family functioning (McCubbin and McCubbin, 1985)
- Is the result of a crisis
- Consists of several factors

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## Family Resilience Factors (Walsh, 2006)

Characteristics:

- - Belief Systems- making meaning of adversity; positive outlook; transcendence and spirituality
- -Organizational patterns- flexibility; connectedness; social and economic resources
- -Communication/Problem Solving- clarity; open emotional expression; collaborative problem solving

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## Research Questions

- 1- Does family functioning (according to the components of the Family APGAR) correlate to level of family resilience?
- 2- Does level of diabetes knowledge correlate to family resilience levels?

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### Questions cont.

- 3- Which of the three resilience factors (i.e. positive outlook, diabetes knowledge and aspects of family functioning) are the most influential in predicting levels of family resilience?
- 4- Is the Family Resilience Assessment (FRA) questionnaire a reliable and valid measure in families with diabetes?

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### Sample

- Convenience sampling
- Focus on variation among participants
- 4 Recruitment sites (3 Diabetes Education Programs, 1 private practice)
- Snowball effect

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### Recruitment

#### Inclusion Criteria

- Family member of person with Diabetes
- Age of person with diabetes 25-60 years
- Age of participant 15-65 years
- Family with Type 1 or Type 2 Diabetes
- English speaking
- Literate

#### Exclusion Criteria

- Gestational Diabetes
- Non-English speaking
- Mentally ill
- Incarcerated
- Considered vulnerable population

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### Research Design

- Descriptive correlational
- Non-experimental
- Demographics questionnaire
- 4 assessment instruments

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### Instruments

- Family APGAR (adaptation, partnership, growth, affection, and resolve)
- Life Orientation Test (LOT)
- Diabetes Knowledge Test (DKT)
- Family Resilience Assessment (FRA)

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### Instrument validity

Instrument	Concept measured	Cronbach's Alpha
Family APGAR <sup>24</sup>	Family functioning: Adaptation, partnership, growth, affection, resolve	0.8585 <sup>25</sup>
Life Orientation Test <sup>26</sup>	Positive outlook; optimism	0.76/0.79
Family Resilience Assessment <sup>22</sup>	Family resilience	0.929
Diabetes Knowledge Test <sup>27</sup>	Diabetes knowledge	>0.7 in numerous settings

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### Family Resilience Assessment

29 item questionnaire

- Likert scale: 0 (undecided) to 5 (all of the time)
- Score range: 0 to 145
- Higher scores indicate higher level of resilience
- Cronbach's Alpha = 0.929

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### Demographics

- Gender                      Female 55      Male 22
- Age                              15 to 65      avg 45
- Ethnicity                      W/NH 75      H 2
- Income                        >\$60,000      70.2%
- Type of Diabetes              T1 31              T2 44

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### Demographics

	Yes	No
• Adverse Event	17	60
• Diabetes Education	33	44
• Has Diabetes	9	68
• Living with Diabetes	34	43

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### Family Functioning and Family Resilience

- $r = 0.59$   $p < 0.1$  (Pearson product moment correlation coefficient)
- Significant POSITIVE relationship between Family Functioning and Family Resilience

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### Diabetes Knowledge and Family Resilience

- Diabetes Knowledge does NOT correlate to Family Resilience
- \*\*This does not indicate that Diabetes Knowledge/Education is unnecessary

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### Predictors of Family Resilience

- Family Functioning was only predictor of Family Resilience accounting for 18% variance
- $R^2 = 46%$ ,  $F = 1,48 = 12.77$ ,  $p < 0.001$
- Positive Outlook and Diabetes Knowledge were not significant contributors to Family Resilience

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### Validity of FRA

- Cronbach's alpha calculated for internal consistency reliability

Cronbach's alpha of 0.92 within this population

- Deemed Valid and Reliable

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### Conclusions

- Significant relationship between family functioning and family resilience
- No correlation between level of diabetes knowledge and family resilience
- No correlation between positive outlook and family resilience

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### Conclusions

- Identification of a strong, valid assessment instrument of families of adults with Diabetes

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### Implications for Diabetes Education

- How can diabetes educators best support and educate families of adults with Diabetes?
- What FR factors are the most important to families of adults with Diabetes?
- Incorporation assessment instrument into clinical practice

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### Future Implications

- Development of education curriculum for this population based on FR
- Further refine FRA as a diagnostic instrument for this population
- Increase focus on this population

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