

Implementing a Support Person as an Intervention for Hemodialysis Patients to Improve the Fluid Regimen Adherence

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Background

- Non-adherence to fluids & dietary regimens has increased hospital admissions and decreased the quality of life (QOL) among End-Stage Renal Disease (ESRD) patients².
- 50% of hemodialysis (HD) patients are non-adherent to fluid intake regimens².
- 10% – 20% of HD patients have a high intradialytic weight gains (IDWG) in the United States (U.S.)¹.

1) Chan, Y. M., Zailiah, M. S., & Hii, S. Z. (2012). Determinants of compliance behaviors among patients undergoing hemodialysis in Malaysia. *PLoS ONE* 7(8). doi:10.1371/journal.pone.0041362; 2) Chironda, G., & Bhengu, B. (2016). Contributing factors to non-adherence among chronic kidney disease (CKD) patients: A systematic review of literature. *Medical and Clinical Reviews*, 2, 229. doi:10.21767/2471-299X.1000038

Purpose

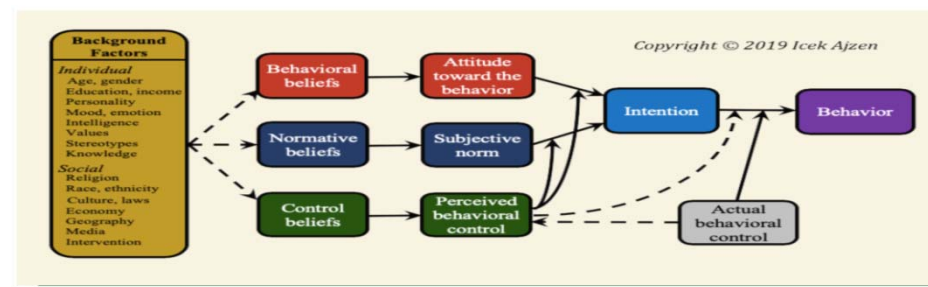
- Implement and evaluate the effect of social support for ESRD patients on HD to improve fluid restriction adherence in a local dialysis center in Southern California.
- Improve patients' adherence levels by monitoring their daily fluid intake logs & IDWG levels.

Methods

- **Design** – Non-experimental pre-post measure design
- **Setting** – Outpatient HD facility in Southern California.
- **Participants**– Purposive sampling.
- **Inclusion criteria** –
 - ❖ are over 18 years of age
 - ❖ have an IDWG more than 3 kg
 - ❖ agree to participate and have a support person who also decides to participate

- **Instruments** – Dialysis Diet and Fluid Non-Adherence questionnaire (DDFQ), Demographics, IDWG – pre and post HD

Supporting Framework – Theory of Planned Behavior



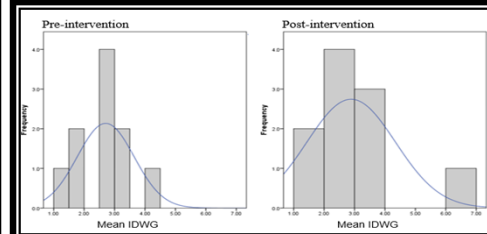
(The Theory of Planned Behavior adapted from Behavior Change Models by Ajzen, 1991.)

Ajzen, I. (1991). The Theory of planned behavior: Organization behavior and human decision process. 50, 179-211. Retrieved from <http://people.umass.edu/ajzen/tpb.background.html>

Results

Demographic characteristics of the participants and their support person

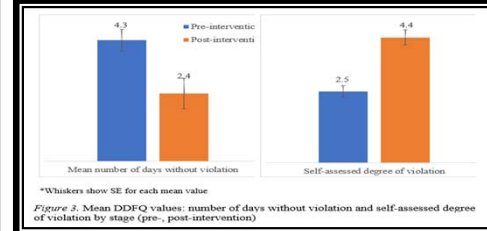
Categorical variables	Count	Percent
Sex		
Male	7	70.0%
Female	3	30.0%
Age		
35-44 years old	1	10.0%
45-54 years old	3	30.0%
55-64 years old	2	20.0%
65-74 years old	2	20.0%
75 years or older	2	20.0%
Time on HD		
1-3 years	2	20.0%
3-5 years	5	50.0%
5-10 years	3	30.0%
10+ years	2	20.0%
Relationship to support person		
Friend	1	10.0%
Family member (daughter/son/grandchildren)	4	40.0%
Spouse	5	50.0%
Sex of Support person		
Male	2	20.0%
Female	8	80.0%
Age of Support person		
35-44 years old	4	40.0%
45-54 years old	3	30.0%
55-64 years old	1	10.0%
65-74 years old	2	20.0%



Mean pre- and post-intervention IDWGs and DDFQ results

	Pre-intervention		Post-intervention		t-test	p-value
	M	SD	M	SD		
Mean IDWG	2.71	0.93	2.89	1.45	-.642	.537
Maximum IDWG	5.58	1.94	4.78	1.71	2.230	.053 [†]
Days not following fluid guidelines	3.20	1.23	1.60	1.71	2.667	.026*
Degree of deviation (0-4 Likert scale)	2.00	0.67	1.30	0.82	3.280	.010*

Note: * marks a significant difference at 95% confidence interval, [†] marks a significant difference at 90% confidence interval.



Discussion

- The project findings did not support the previous research, which showed that having a support person helps to improve fluid-restriction adherence and lower the mean IDWG.
- The DDFQ scores were significant: Pre-assessment frequency and degree of adherence with fluid regimens were lower when compared to post assessment results.
- The IDWG scores did not decrease during HD treatments.
- Although having a support person leads to positive outcomes, follow-up is needed to determine if the outcomes are temporary or last for an extended period of time.

Limitations

- **Small sample size** – Limited generalization of findings created insufficient power to find significance.
- **Holiday season** – The project was conducted during the holiday season and typically involve drinking beverages and eating holiday foods, much of which is not included in HD diet and fluid regimens.
- **Duration of project** – Four weeks. Significant outcomes might have resulted if the project had been sustained for more than four weeks.

Implications for Practice

- Discussion of monthly fluid gain reports with patients and their support person may have a positive benefit in lowering IDWG levels.
- An emphasis on conducting a weekly follow-up with the patient including all health care providers along with the support person.
- The findings showed that the use of a support person provided an alternative to help the HD patients control their fluid and diet adherence.
- More intervention studies can be conducted to improve the clinical outcome of adherence-related behaviors.

