

BEHAVIORAL CHANGE INTERVENTION AND PREDICTORS OF SELF MANAGEMENT BLOOD PRESSURE CONTROL IN UNDERSERVED POST-STROKE POPULATION



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INTRODUCTION

- Stroke is a leading cause of death and disability in the U.S. and a strongest predictor of a subsequent stroke.¹
- Self management (SM) of stroke risk factors prevents many strokes and is a good practice in the secondary stroke prevention.²
- “Readiness to Change” (RTC) is used to assess where patients are in the cycle of change to set appropriate goals and reach attainment in the SM of stroke risk factors.³
- Blood pressure (BP) is one of the most important risk factor to control to prevent another stroke.
- Little is known about predictors of BP control in SM of underserved post-stroke population.²

PURPOSE

We examined the association between RTC behavioral intention and demographics, and BP control in patients engaged in the V-STOP SM program.

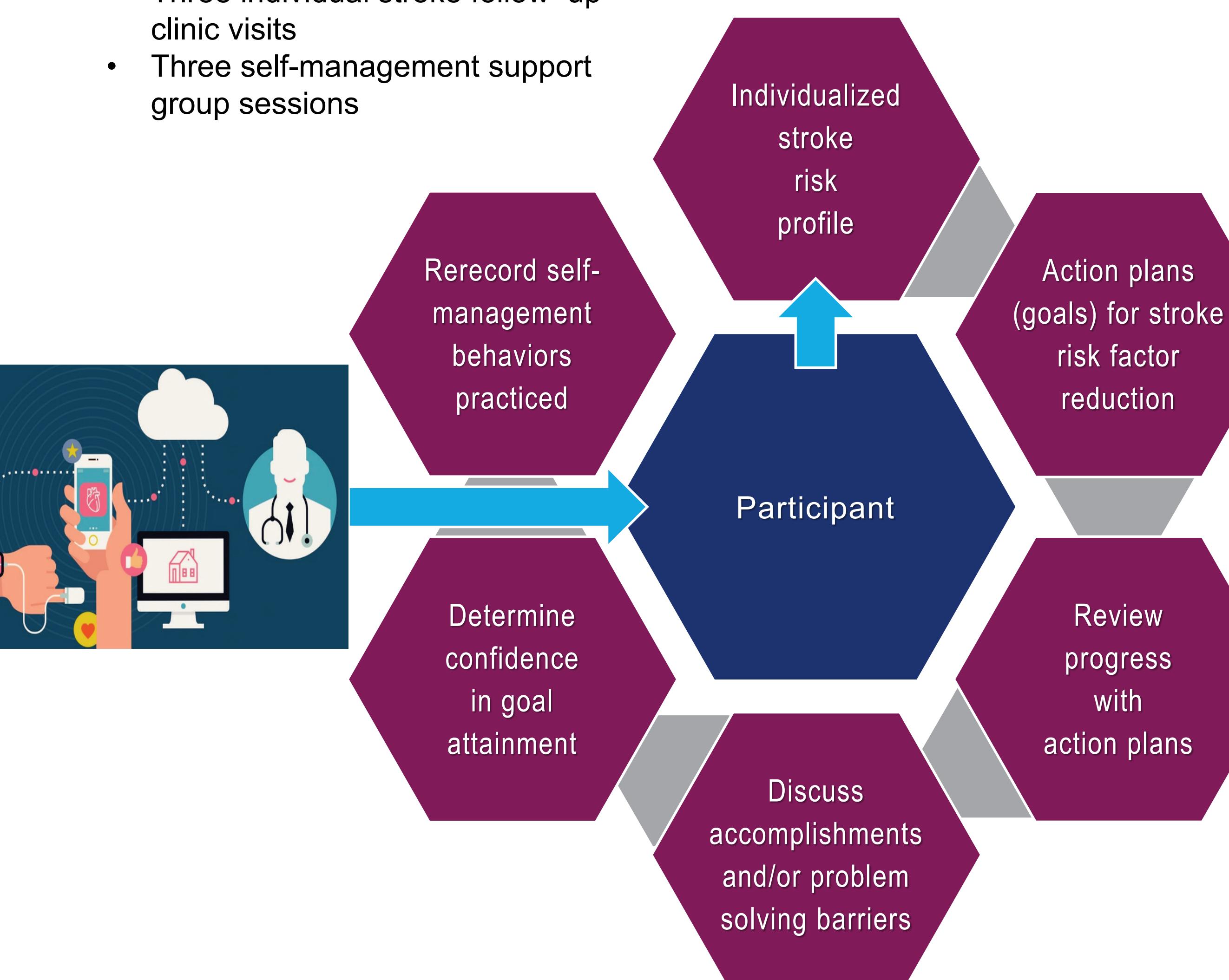
READINESS TO CHANGE (RTC) INSTRUMENT

Readiness Statement	SD	D	U	A	SA
I really want to take action to manage my stroke risk factors.	1	2	3	4	5
At times, I feel overwhelmed about the actions I need to take to manage my stroke risk factors.	5	4	3	2	1
At times, I wonder if my actions will really improve my health.	5	4	3	2	1
I know my risk of another stroke or a heart attack will increase if I don't take action to manage my risk factors.	1	2	3	4	5
I often think about actions I can take to manage my stroke risk factors.	1	2	3	4	5
I'm not just thinking about taking action to manage my risk factors, but I'm already doing something about it.	1	2	3	4	5
It is important that I communicate what I want to do to manage my stroke risk factors with my health care team and caregivers.	1	2	3	4	5

SD = Strongly Disagree; D = Disagree; U = Unsure; A = Agree; SA = Strongly Agree.

METHODS

- Pre-experimental pre/post six weeks risk reduction intervention program delivered to stroke survivors via videoconferencing, with focus on the BP control.
- The V-STOP program:
 - Three individual stroke follow-up clinic visits
 - Three self-management support group sessions



- Inclusion criteria: History of stroke and/or TIA, >18 years, and 2+ uncontrolled risk factors.
- N = 66 patients participated in the program, n = 51 completed RTC assessment and provided BP measures at baseline and 6 weeks.
- RTC were documented and scored using Prochaska and DiClemente modified survey.³
- The association between predictors and BP control was evaluated using logistic regression in univariate and multivariate analysis.

RESULTS

- | | N = 66 | % |
|--|--------|---|
| Participants' Chronic Conditions at Baseline | | |
| Hypertension | 90 | |
| Diabetes | 60 | |
| Hyperlipidemia | 59 | |
| Depression | 28 | |
| Heart Disease | 24 | |
| Arthritis | 22 | |
| Sleep Apnea | 10 | |
| n = 51 | | % |
| Demographics | | |
| Mean Age, yr. | 58 | |
| Females | 43 | |
| Ethnicity | | |
| White | 71 | |
| African American | 29 | |
| Hispanic | 0 | |
| Other | 0 | |
| Education | | |
| High School | 23 | |
| Some College | 11 | |
| Some Graduate | 8 | |
| Graduate or More | 2 | |
| Annual Income < \$25K | 65 | |
| No Health Insurance | 45 | |
- The probability of PB control at the end of the program was 78% for patients (n = 14, reference group) who were younger than 60 years of age and had not received higher education.
 - 88% for patients (n = 7, odds ratio [OR] = 2, p = 0.6) younger than 60 years who had received higher education.
 - 92% for patients (n = 11, OR = 3.1, p = 0.034) who were older than 60 years and had received higher education
 - The probability of BP control was lowest (62%) for patients (n = 8, OR = 0.46, p = 0.3) older than 60 years of age who had not received higher education.
 - None of the other factors evaluated impacted PB control.

CONCLUSIONS

- Education higher than high school and age may predict BP control post intervention.
- Race and income were not significant predictors of the BP control.
- No significant associations were found between RTC scores and BP control.

FUTURE RESEARCH

These findings require validation in larger datasets to help design more effective SM intervention programs.

REFERENCES

1. Boger EJ, Demain S, Latter S. Self-management: a systematic review of outcome measures adopted in self-management interventions for stroke. *Disabil Rehabil*. 2013;35(17):1415-28.
2. Jones F, Riazi A. Self-efficacy and self-management after stroke: a systematic review. *Disabil Rehabil*. 2011;33(10):797-810.
3. Prochaska JO1, DiClemente CC, Norcross JC. In search of how people change. Applications to addictive behaviors. *Am Psychol*. 1992;47(9):1102-14.



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