

Sources of Efficacy for Walking and Climbing Stairs Among Older Adults

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What is Efficacy?

"Perceived self-efficacy is concerned with judgements of personal capability" (Bandura, 1997, p. 11). In this study, we used Bandura's Social Cognitive Theory to look at beliefs about capability for walking blocks and climbing stairs.

PURPOSES

To identify the determinants of older adults' efficacy for "getting around" home and community
 To explore the relationship between work time physical activity (WTPA) and leisure-time physical activity (LTPA).

Questions

- 1) Which demographic variables influence self-efficacy for walking blocks and climbing flights of stairs?
- 2) Which self-referent beliefs predict efficacy for walking and stair-climbing?
- 3) Are people who are physically active at work too tired to do leisure physical activity?

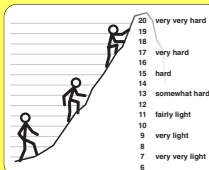
METHOD

Recruitment

Convenience sampling of older adults at Alberta Seniors Games, seniors' societies, recreation facilities, & health fairs.
 Targeted recruitment of low-active seniors via student interviews.

Sample Items

Exercise Confidence:
 How sure are you that you could do ... brisk walking for 20 minutes?
 4=very sure
 3=quite sure
 2=not very sure
 1=I know that I couldn't



Perceived Exertion:
 Rate the exertion you would feel doing brisk walking for 20 minutes.

447 adults 55+ years old surveyed in Medicine Hat, Regina, and Edmonton. 389 completed a 30 minute Aging and Activity Survey that included items about:

- 6 demographic factors: age, sex, health, education, cultural background, and lifelong physical activity
- 7 self-referent beliefs (exercise confidence, perceived exertion, enjoyment, and risk, support, benefits, and motives) about 6 exercise activities (brisk walking for 20 minutes, curl-up 10 times, modified push-up 5 times, 50 minute aqua-fit class, slow stretch to touch to toes, pedal an exercise bike for 20 minutes)
- Weekly recall inventories of work-time and leisure-time physical activity.

DISCUSSION

Why the difference in men's and women's walking and stair climbing efficacy?

Men's activity patterns
 Men are generally more active than women, thus men ARE more efficacious regarding physical activity.

Table 1. Demographic data for Men, Women, and Total Sample

	Women	Men	Total Sample
N	209	180	389
Mean (s.d.) age in years	70 (7.5)	68.98 (6.0)	69.74 (7.8)
Physically active over lifetime	42.9%	53.4%	47.9%
High school education	65.9%	58.4%	62.4%
Good to excellent health	84.4%	86.6%	85.3%
# Rx medication types			
Mean (s.d.)	1.29 (1.50)	0.77 (1.02)	1.05 (1.32)
Born in Canada	84.1%	78.8%	81.8%

Women's medication patterns

Women took twice as many prescription medications as men; this may reflect poorer health status or medication may in some way weaken efficacy scores.

Gender socialization

Cultural norms for men to demonstrate superior strength and endurance at all ages may inflate men's and deflate women's estimations of walking and stair climbing capability.

How might cultural background affect stairs efficacy?

Older adults born in other countries (e.g. Northern Europe) judged their capability to climb stairs as high. Cultural background may strengthen stair-climbing efficacy if:

- architectural differences in European countries provided more stairs in daily living
- the most healthy and robust individuals immigrate to Canada

Evidence of self-stereotyping.

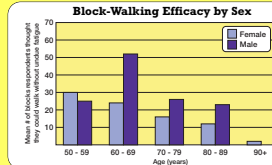
Age and health are simultaneous independent predictors of stair climbing efficacy.

Why did low exercise enjoyment predict high walking efficacy scores?

- Walking may be perceived as an enjoyable activity rather than an exercise; conversely, seniors who enjoy the challenge of other fitness activities may not enjoy walking for exercise.

Walking Efficacy

How many city blocks could you walk on level ground without undue fatigue?
 Men: x=35 (s.d.=81)
 Women: x=19 (s.d.=17)



Demographic predictors of walking efficacy

Feeling healthier (p<0.05)
 Being male (p<0.05)

CONCLUSIONS

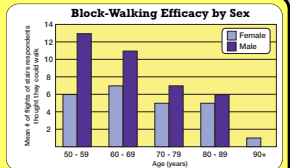
1. Older men feel far more physically capable to "get around" in the community than do their female counterparts.
2. Efficacy for walking distances and climbing stairs is affected by one's subjective rating of health.
3. Beliefs about expected exertion required strongly predict what people will attempt to do to get around. Physically more active people have lower perceptions of exertion.
4. People who have physical work days do not necessarily take it easy in their leisure time; conversely, people who are sedentary at work tasks do not necessarily make up for it in other areas of their lives. Work and leisure appear to be independent segments of our lifestyles that have little connection.

Cognitive predictors for walking efficacy

exercise confidence (p<0.01) perceived exertion (p<0.01)
 beliefs about benefits (p<0.001) non-enjoyment of exercise (p<0.05)

Stair-climbing Efficacy

If the elevator was broken in a building, how many flights of stairs would you consider climbing to visit a friend?
 Men: x=10 (s.d.=12.4)
 Women: x=6 (s.d.=4.9)



Demographic Predictors of stair-climbing efficacy

Lifelong activity (p<0.01) Feeling healthier (p<0.01)
 Being younger (p<0.01) Being male (p<0.01)
 Not born in Canada (p<0.001)

Cognitive predictors for stair climbing efficacy
 Low perceived exertion in fitness exercises (p<0.001).

Is there a relationship between WTPA and LTPA?

There was no relationship between energy expended for Work-time and Leisure-time physical activity.