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# Effect of a structured health promotional program using the self-support groups on lifestyle behavior: The *Ath Waas* Interventional Trial

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## Abstract:

**BACKGROUND:** *Ath Waas* is a one-of-a-kind health promotion intervention that focuses on chronic disease prevention behaviors through peer support and social support network development. The goal of the study was to see how effective *Ath Waas* was in a city setting in India.

**MATERIALS AND METHODS:** From July 2018 to July 2019, we used a mixed-methods intervention research design including many sites. At 0, 2, 3, 5, 7, 9, and 12 months, data were collected using participant surveys and in-person interviews. Throughout the research period, participants met in groups at least once a month to self-monitor health indicators, prepare and share a healthy snack, engage in physical activity, create a healthy lifestyle goal, and socialize. Data were analyzed using a paired *t*-test, and inferences were drawn thereof.

**RESULTS:** There were statistically significant improvements in the majority of the domains of health from pre- to post-program, and 59% of participants reported specific behavioral changes as a result of their participation in the *Ath Waas*. Peer support, obtaining particular health knowledge, inspiration, motivation, or accountability, the empowering effect of monitoring one's own health indicators, overcoming social isolation, and knowing how to better access resources were all positive health outcomes. The mean knowledge scores for diabetes, hypertension, and nutrition in the first survey were  $20.3 \pm 2.1$  and  $5.2 \pm 1.9$  and in the last survey were  $22.6 \pm 3.1$  ( $P < 0.05$ ),  $5.8 \pm 2.4$  ( $<.05$ ), and  $44.3 \pm 3.9$  ( $<0.001$ ) after the intervention, respectively.

**CONCLUSION:** The necessity to find novel approaches to chronic illness prevention and management drove the implementation and evaluation of *Ath Waas*. While more research is needed to confirm the current findings, it looks like *Ath Waas* could be a useful tool for empowering community members to support one another while promoting healthy lifestyle choices and recognizing early changes.

Clinical Trial Registry of India: CTRI/2019/01/017028 (registered on 10/01/2019).

## Keywords:

Health promotions, lifestyle, primary disease prevention, primary prevention, primordial prevention, relapse prevention

## Introduction

Community-based behavioral health promotional intervention is being offered in various domains, including

government and nongovernment healthcare setup that helps explore the relationship between peer support and perceptions of health and wellness. Support from peer groups has been one of the quintessential backbone of giving and receiving

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help founded on key principles of respect, shared responsibility, and mutual agreement of what is helpful in any socially learned behaviors. Peer group support is usually empathetic through the sharing of experiences of being within similar sociocultural environment. As confidence-building measures in the peer groups continue, peer persons are able to respectfully challenge each other, explore new behaviors with one another, and move beyond previously held self-concepts, thus moving toward mutual empowerment.<sup>[1]</sup>

Support from peers helps individuals adjust transitory changes in life, such as the birth of a child, stress, significant losses, or long-term disabilities or chronic diseases, and health promotion initiatives, including support for health behavior changes.<sup>[2,3]</sup> Muilwijk et al.<sup>[4]</sup> stated that lifestyle intervention using behavioral modifications in peer support programs are emerging as highly beneficial programs for people to manage health issues in a low-resource setting. *Ath Waas* is a Kashmiri term that signifies brotherhood and socializing in a community. Social learning theory, peer support, and empowerment theory form the theoretical foundation for the *Ath Waas* intervention. Social learning theory explains human behavior as a continuous interaction between cognitive, behavioral, and environmental influences: People learn through observing others' behavior and attitudes and the outcomes of the behavior. The empowerment approach "redefines the professional's role to one of collaborator [where] participants have an active role in the change process."

This study introduces the novel concept of the *Ath Waas* intervention, which leverages the power of peer support within the context of community-based behavioral health promotion. It seeks to address critical issues related to health and wellness in an innovative manner. The rationale behind this study lies in recognizing the significance of peer support in influencing health-related behaviors and perceptions. By harnessing the principles of peer support, this intervention aims to create a positive impact on individuals' overall well-being. At the core of this work is a robust conceptual framework that integrates social learning theory, peer support theory, and the empowerment approach. This framework guides the development and implementation of the *Ath Waas* intervention, providing a structured and evidence-based approach to community-based behavioral health promotion.

## Materials and Methods

### Study design and setting

A participatory community-based approach actively involves community members at every stage of the research process. Postgraduate scholars and healthcare

providers played a crucial role in supporting the implementation of the *Ath Waas* Project and collaborated closely with the researchers [Figure 1]. Community group members actively participated in piloting the *Ath Waas* model, providing invaluable feedback that guided the refinement of research tools.

The research project was framed to implement and evaluate the effectiveness of *Ath Waas* in an urban Indian setting. In our program design, peers in *Ath Waas* groups were fellow group members. Participants attended "health classes" at enrollment to receive baseline knowledge about a variety of health topics and training on how to take their own health measures and work independently as a group. Participants then met in small groups at least once a month for about 2 hours to learn about relevant health topics from each other and from healthcare providers, participated in physical exercise, learned and shared a nutritious snack on the principles of culinary medicine, monitored and recorded their health measures in logs, and socialized as per the core competencies of lifestyle medicine.

### Study participants and sampling

As we conducted a pre- and post-assessment with the numerical outcome variable, we used the Wilcoxon signed-rank test for sample size calculation with input parameters of 5% type I error and 80% power to detect a moderate effect size of 0.5. We anticipated an effect size of 0.5 as this intervention works more with a moderate effect size. The sample size calculated was 35. To increase the validity further in both arms, we increased the sample size to adjust for attrition and other losses to samples.

The objectives of the intervention were to:

1. Create *social and peer lifestyle support networks* to increase participants' ability to make *healthier lifestyle choices* to support and improvise on core competencies of lifestyle medicine, including *personal wellness and empower participants* to take action to improve their health and develop connections with others to reduce social isolation.
2. Increase *participants' awareness* of the connection between *personal wellness, healthy lifestyle choices, healthy weights*, and those factors within and outside of their control.
3. Maintain or improve measurable health indicators.
4. Increase access to primary care services and other community programs or services.

### Data collection tool and technique

To ensure a comprehensive understanding of the intervention, we employed a mixed-methods intervention study design, employing a multicentric approach and adopting a flexible form of inquiry that captured diverse perspectives. Data collection encompassed pretest

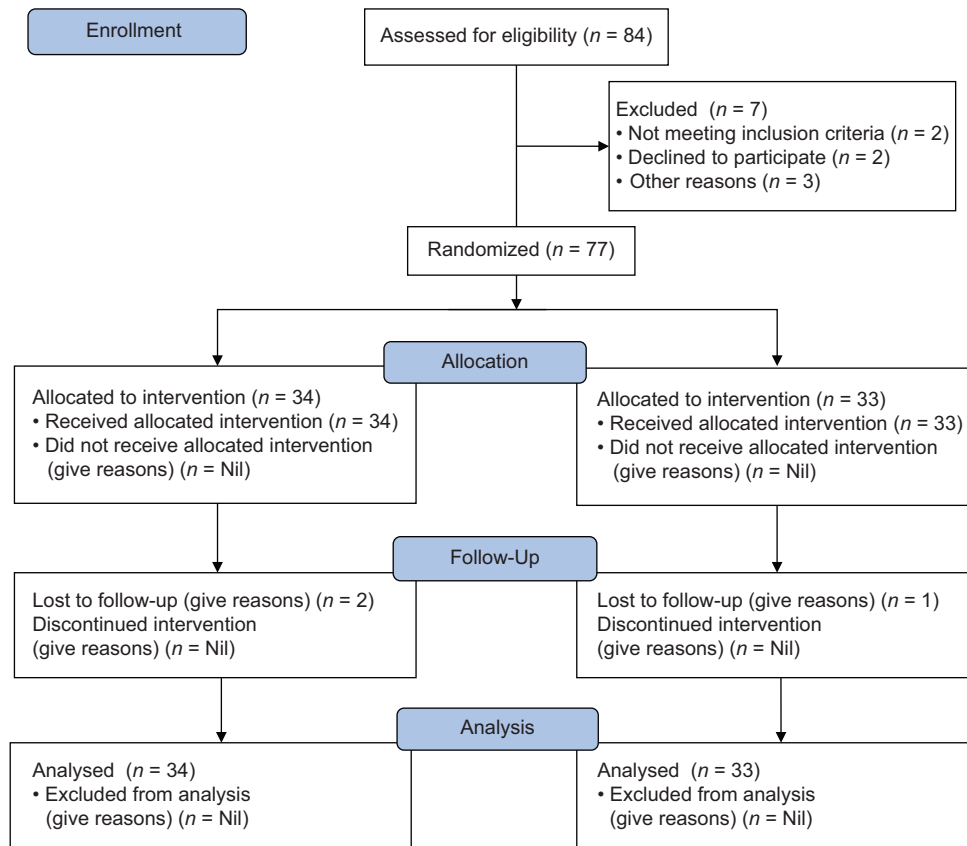


Figure 1: CONSORT flow diagram

and posttest surveys, as well as qualitative findings derived from one-on-one interviews with participants. Behavioral interventions commenced in the first month, with data collection spanning from July 2018 to July 2019. Surveys, interventions, and interviews were conducted at baseline (0 months), 2, 3, 5, 7, 9, and 12 months.

### Data collection

Data collection was accomplished using a participant survey and individual face-to-face interviews. Participant logbooks were followed up by selected health indicators.

The recruitment techniques used included community announcements, handouts to beneficiaries, Accredited Social Health Activists (ASHA), healthcare provider referrals, posters located in areas where people congregate (grocery stores, pharmacies, community centers, and mosque announcements), and in-person recruitment through healthcare workers active scrutiny through the population. The study population comprised individuals aged 18 years and above, residing in Kashmir, who were fluent in Kashmiri, Urdu, or English, and were generally in good health, including those with stable chronic conditions. A targeted recruitment strategy was employed to include socially isolated and economically disadvantaged individuals, such as the elderly and single mothers. Interested individuals completed an application

form and were then assigned to either preexisting or new groups based on factors, such as age, community area, and availability.

Participants actively participated in Ath Waas meetings, which consist of six face-to-face sessions lasting 1–2 hours each. These sessions aimed to empower participants to monitor their own health and foster independence within the group setting. The meetings emphasized the multifactorial nature of health and provided comprehensive support and guidance.

Topics included were as follows:

1. Health indicators, 2. chronic disease, 3. nutrition, 4. physical activity, 5. sleep, 6. Stress, 7. general health, 8. primary care through the years, 9. medications, 10. supplements, 11. smoking, 12. social supporting networks, and 13. how to work effectively as a group.

It was mandatory for participants to attend the sensitization sessions to ensure that all participants have the same information, knowledge, and engagement. Ath Waas groups are designed to be participant led and consist of six to eight people, with support and guidance from preventive medicine health professionals as needed. The groups met at least once a month for 1- to 2-hour sessions. Each session had mandatory components,

including 1) monitoring health indicators, 2) preparing a healthy snack, 3) participating in physical activity, 4) sharing action plan for the month (setting a lifestyle goal)—*optional*, 5) exchanging contact information with a “peer” to do regular check-ins, and 6) socializing.

Ten groups were started over a one-year enrollment period. The criteria for inclusion were groups that met regularly and participated in at least three of the data collection periods within the time frame of the research (0, 2, 3, 5, 7, 9, and 12 months).

### **Ath Waas participant survey and intervention**

A comprehensive questionnaire, adapting validated instruments from multiple sources, was developed specifically for this study to measure the effects of *Ath Waas* group participation on the following health-related topics:

- Knowledge of diabetes and hypertension
- Nutrition, physical activity, and sleep self-assessments
- Smoking status
- Mental health status
- Access to healthcare providers
- Awareness of community programs and services
- Understanding how to improve overall health
- Connectedness to people in the neighborhood and community.

The project questionnaire was developed to maximize content validity and reliability and was edited and modified by a multidisciplinary expert group with experience and expertise in community mobilization and service delivery. Postgraduate scholars interviewed and collected the completed surveys, consisting of baseline surveys when newly enrolled participants attended their first health school session (Time 1), and follow-up surveys and intervention at 2, 3, 5, 7, 9, and 12 months to assess the change in baseline parameters and lifestyle vital signs to record the responses and maintain the intervention sensitization. Data from the completed surveys were entered into a database.

### **Individual interviews**

The postgraduate researchers interviewed all participants at baseline (Time 1), with follow-up interviews taking place at 0, 2, 3, 5, 7, 9, and 12 months. The baseline interview included two questions about participant perception of factors that had a positive or negative impact on health. The follow-up interviews included the two original questions plus questions intended to elicit feedback about the perceived impact of regular participation in an *Ath Waas* group and ways to improve *Ath Waas* groups. The baseline interviews were documented by the interviewers on paper and then transcribed; however, all follow-up interviews were documented on paper and audio-recorded and then

transcribed for analysis. Baseline interviews (Time 1) were scheduled at the first *Ath Waas* group meeting of each group following group initiation.

### **Data analysis**

The statistical analyses followed the prespecified statistical analysis plan. A *t*-test was the test statistic used to perform the pre- or post-analysis of the survey data with an alpha set at .05. This analysis approach was modified from the intent-to-treat approach often used in trials.<sup>[5]</sup> Data completeness for baseline variables was almost 100% and approximately 89% at 12-month follow-up, mainly due to loss to follow-up. We considered data to be missing at random based on the pattern of missing data. These include covariates included in the main analysis model (sex, age, country, and site) and the auxiliary (baseline) variables (socioeconomic status, smoking status, alcohol consumption, physical activity, waist circumference, and HbA1c).

### **Interviews**

All interview replies were analyzed thematically. The first baseline interview and the first follow-up interview data transcripts are individually analyzed by the lead investigators. The transcripts were then independently evaluated and coded by the primary investigator and research assistant. They then collaborated to discuss the various analyses and attempt to agree on how the results should be interpreted.

### **Randomization and masking**

Due to the obvious nature of the care, neither participants nor medical professionals could be made unaware of the intervention arm. They were concealed from study outcomes and follow-up assessments, nevertheless. Cluster randomization was used at various follow-up stages. During interventions, the danger of the Hawthorne effect is decreased by cluster randomization.<sup>[6]</sup>

### **Ethical consideration**

Ethical approval was obtained from the Institutional Ethics Committee, SKIMS vide SIMS1131/IEC-SKIMS/2018-367. The local-language version of information sheets and consent forms was made available. Each participant gave their informed consent. Participants who were unable or unwilling to give consent were not included in the study.

## **Results**

### **Demographic data**

Client demographics were obtained from 74 participants [Table 1] though not all participants answered every question. Participants were primarily female (68/74) with an age range from 20 to 72 years, with predominantly aged 31–40 years, followed by



**Table 1: Ath Waas participant attendance for in-person interviews**

	Enrollment	Participated in three or more data collection periods	Final
Group 1	7	7	7
Group 2	8	8	8
Group 3	8	8	8
Group 4	8	8	8
Group 5	8	8	8
Group 6	8	7	7
Group 7	9	9	9
Group 8	10	9	9
Group 9	11	10	10
Total	77	74	74

#### Individual interview questions for Ath Waas participants

Question	Baseline interviews <sup>a</sup>	Follow-up interviews <sup>b</sup>
1. In the last 12 months, what has helped or made it easier to stay healthy and feel good?	21	53
2. In the last 12 months, what has not helped or made it harder for you to stay healthy and feel good?	44	30
3. Since joining the ATH WAAS group, have you received support from a member of the group?	NA	74
4. Since joining the ATH WAAS group, have you provided support to a member of the group? If yes, describe.	NA	56
5. How has being part of a ATH WAAS group helped you to improve your health or stay healthy?		74

<sup>a</sup>Baseline Interview. <sup>b</sup>Followup interviews at various timelines

41–50 years. Of those who answered the question, marital status was equally split between married (35/74) and single, widowed, divorced, or separated. Forty-six percent (34/71) had children living at home, and 50% (37/74) had no children living at home. Forty-four percent had community college or university education, thirty-nine percent were high school graduates, and nearly half of the participants had a monthly household income of less than \$200.<sup>[7]</sup>

#### Program responses on health-related measures

The key finding for the pre- or post-analyses of the survey [Table 2] was that the only statistically significant improvements from pre- to post-program were in the Mental Health Continuum Score. The continuum scores of knowledge related to diabetes, hypertension, nutrition, specific levels of physical activity, smoking, access to healthcare providers, and feeling connected to people in the neighborhood showed incremental responses with statistically significant results. The other post-program health-related measures were not statistically significant.

#### Results of individual interviews: Health-related aspects

Participants were asked to list elements that either improved or adversely affected their health over the previous 6 months. The replies remained similar over data collection, with the only variation being at 3, 6, and 12 months when more respondents acknowledged the benefits of Ath Waas group participation.

#### Positive influences on health

The elements determined to positively impact health include the following: Through all survey phases, a *balanced diet* and *physical activity*, including both structured and leisure activities, were consistently named as having a greater impact on one's health. Although *social support* was mentioned at the beginning (baseline or pre-intervention), group involvement emerged as the most common response to social support in subsequent time periods. A *calm demeanor*, along with being content at work and feeling less stressed, as well as having a *positive attitude* and *beliefs*, were also mentioned by participants as having an advantageous effect on general health. The aspect having a positive impact that was most frequently noted was *supportive relationships* with coworkers. The peer group's support was taken into consideration. The majority of respondents identified the positive impact of *knowledge about accessibility to services* over time.

#### Negative influences on one's health

It was discovered that six things were detrimental to one's health. *Stress* was identified as the most prevalent reason for poor mental health. Participants reported finding pressure from job, family, and other sources overwhelming. However, by Time 3, fewer participants reported that stress or their mental health had a negative impact on their health [Table 3]. Many people identified *poor nutrition* as having a negative impact, as well as social conditions that encouraged overeating, poor food choices, and challenges with maintaining or

**Table 2: Analysis of Ath Waas participants' pre- or post-program responses on health-related measures**

Health-related measure	Response	Data collection event (mean±SD)		P (for column comparison)
		First survey	Last survey	
Diabetes knowledge score (n=74)	Low score	20.3±2.1	22.6±3.1	<0.001
	High score	81.2±2.13	85.7±3.4	>0.05
Hypertension knowledge score (n=74)	Low score	5.2±1.9	5.8±2.4	<.05
	High score	93.1±2.3	95.2±4.8	<0.001
Nutrition score (n=71)	Low nutrition risk	28.7±4.6	44.3±3.9	<0.001
	Moderate nutrition risk	36.7±1.2	33.5±4.8	<0.001
	High nutrition risk	38.1±1.2	37.2±4.7	<0.05
Physical activity score (n=74)	Very active	5.1±1.1	10.3±2.1	<0.001
	Active	36.1±2.1	38.7±2.3	<0.001
	Acceptable	21.2±3.2	22.3±1.2	<0.001
	Inactive	15.1±2.4	14.9±2.9	<0.05
	Sedentary	24.1±2.3	25.2±3.2	<0.001
Sleep scale (n=74)	Not a problem	71.3±3.8	65.2±4.2	<0.001
	Problematic	32.3±1.2	32.8±1.6	<0.001
Mental Health Continuum Score (n=74)	Flourishing	42.2±0.3	61.2±4.0	<0.001
	Languishing	11.2±1.2	5.2±2.1	<0.001
	Moderate	42.7±2.1	38.2±2.2	<0.001
Have you ever smoked (n=74)?	No	58.1±1.3	59.3±2.1	<0.001
	Yes	41.2±1.3	42.2±1.6	<0.001
Do you smoke now (n=74)?	No	92.1±2.1	94.2±3.6	<0.001
	Yes	82.3±1.2	86.1±2.5	<0.001
Access to healthcare provider (n=74)	Neutral	7.2±3.5	7.0±1.1	<0.05
	Disagree	13.1±1.2	12.1±1.3	<0.001
	Agree	73.2±2.8	85.1±2.1	<0.001
Aware of community programs and services (n=74)	Neutral	13.1±1.9	10.2±3.8	<0.001
	Disagree	24.3±2.9	10.8±2.1	<0.001
	Agree	59.2±5.5	75.1±5.6	<0.001
Understand how to improve health (n=74)	Neutral	6.8±1.5	6.6±2.1	>0.05
	Disagree	17.1±2.1	8.6±3.1	<0.001
	Agree	71.2±1.2	89.1±3.2	<0.001
Connected to people in the neighborhood (n=74)	Neutral	11.6±1.8	13.8±2.1	<0.001
	Disagree	23.2±1.6	15.7±1.5	<0.001
	Agree	56.1±2.01	72.1±2.2	<0.001

gaining weight. By Time 3, nevertheless, fewer people believed that a bad diet was harming their health. *Loss of physical activity, declining health, a lack of time or work-life balance, and unsupportive relationships* were all emphasized as adverse health outcomes across all time periods. Table 4 categorizes the variables that affected health in a positive or negative way into themes with appropriate quotes.

### Findings from individual interviews: positive impact of Ath Waas group participation

Questions 3 to 6 were intended to identify whether involvement in Ath Waas had a positive impact on participants' health and what participants liked about the Ath Waas group. The different themes that emerged from our analysis were lifestyle changes, motivation, peer support, increasing knowledge, overcoming social isolation, and knowledge about accessibility described more fully as follows.

### Increase in knowledge

Participants highlighted how the health school, guest speakers, and each other provided them with information about health-related topics and healthy choices. They assessed the impact of new skills they had learned, such as exercises, blood sugar and blood pressure measurements, cooking, and meditation.

### Lifestyle change

More than half of those who participated in the Ath Waas group were able to articulate specific behavioral changes as a result of their involvement. Nutrition and exercise, as well as stress and weight management, blood sugar, and/or blood pressure control, were all areas where people changed their behavior. Goal setting and other changes were also noted by participants as positive qualities. Participants also highlighted how the Ath Waas group's lessons had a good impact on other members of their families.

**Table 3: Positive and negative factors affecting health with representative quotes from ATH WAAS participants**

Factors impacting health	Quotes
Positive factors	
Physical activity	"regular exercise"; "exercise session 2/week"; "brisk walking"
Balanced diet	"change in diet"; "eating healthy foods"
Social support	"meeting with new people"; "interacting with [ATH WAAS]"
Calm demeanor	"learning to adjust with issues"; "less stress"
Positive attitude and beliefs	"motivated when [I'm] with others"; "self reliant"
Supportive relationships	"a supportive group"; "my friends"; "ATH WAAS members have helped"; "[they] play a good role in it"; "we socialize outside ATH WAAS so it's good to talk out things and share"
Access to services	[Access to]"doctor"; "dietician"; "Counsellor"; "nurse"
Negative factors	
Stress	"I feel overwhelmed"; "busy schedules"; "home responsibilities and issues with ... family and friends"; "lack of support ... [in family]"; "I work too many hours ... have too many responsibilities"; "family life is always stressful"; "my ... [son, daughter, husband, mom, children]"; "death in the family"
Poor nutrition	"attending weddings"; "bad eating habits"; "[we eat unhealthy]"; "being overweight"
Loss of physical activity or exercise	"not enough time"; "don't have time [to exercise]"
Declining health	"heart ailment"; "diabetes"; "arthritis"; "pain"
Lack of time or work–life balance	"work demands"; "family demands"; "just been really busy, not much time for myself"
Unsupportive relationships	"not having enough family support"; "family has made it harder"

**Table 4: Positive health impacts of Ath Waas participation and representative quotes**

Health impacts of ATH WAAS participation	
Increase in knowledge	Specific health information: "healthy eating ... managing blood sugars"; "updated knowledge about food items" Impact of learning and new skills: "We get information and then get to practice it"; "bringing new things to my life—it's good"
Lifestyle change	Nutrition: "I am making better food choices"; "now I eat more fruits and vegetables"; "I have lessened my salt and I avoid fatty meals"; "reduced oil intake," "reduced sugar intake" Exercise: "The ATH WAAS group motivated me to go for a walk"; "I started exercising" Stress: "It's helped me recognize what's causing it all [the stress]"; "I ... [used] the stress release techniques I learned from ATH WAAS" Management of weight, blood sugar, or blood pressure: "I have lost weight"; "[since participating in ATH WAAS] I have started taking my medication regularly"; "My sugars are better"; "My doctor has reduced my ... medications"; "[My doctor] noticed a significant [improvement] ... from when I started the ATH WAAS program..." Goal setting: "I am learning how to set reasonable goals"; "I am sticking to [my goals]" "The doctor helps to Assess, Assist, Advice, Arrange, Act" Impacts to others: "When you buy food ... you have to look at the label... [I am] also teaching my family members to [look at labels]"; "Makes me think [when] I prepare ... lunch for my kids", "Purchase food which are nutritive" Other changes: "I quit smoking"; "I am making better and healthier choices"; "I laugh more"
Motivation	Inspiration: "When I see other people change towards the better or really trying hard to get out of their ruts ... it inspires me"; "There is inspiration to try new things" Motivation: "They keep you doing things you don't want to do"; "motivation to stick to it" Accountability: "The group has created accountability"; "taking [health] into your own hands ... [it is] a whole mind-set that's different" Sharing the benefits: "I encourage others to attend ... 'You will learn something!"; "I try to invite [others when] I share the information with my sister and mom ... [like] exercising, eating health foods..."
Overcoming social isolation	Belonging: "I feel like I belong"; "I am part of something"; "I don't have a lot of friends ... it's nice to know someone is out there thinking about [and remembering] you"; "I have lived in this area for 30 years, but have only begun to feel a part of the community since ATH WAAS" Getting out: "helped to spare time for myself"; "getting people out of their isolation"; "It forces us stay-at-home moms to get out ... that's probably the best thing..."
Peer support	Sharing, listening, or supporting: "We share many of the same problems ... My problems ... seem so much more manageable.... If they can do this, I can ... do this too"; "ATH WAAS may have saved my life"; "I pick her up [to get to ATH WAAS]"; "She accompanied me to my doctor's appointment"; "I've been giving her cookbooks because she doesn't have any" Feeling safe and unjudged: "If I need help, I'm not afraid to ask"; "Everyone has their own struggles and in [this] environment we have a safe place to talk about these things..." Friendship or sense of community: "feel a part of the community"; "they are my friends now"; "we meet outside the group"; "[the calls] just help to kinda keep track"
Knowledge of accessibility to services	Community services: "They tell us what is offered in the community"; "If I need information I [know who] I can call and it's good..." Healthcare services: "We have a Physician to support us"; "The support is really good between healthcare and ATH WAAS and [how they] reach out to the community is really something"

*Motivation*

Participants noted how being a part of an Ath Waas group influenced their health by providing inspiration, motivation, and accountability. Participants also expressed a wish to spread the word about the benefits of joining the Ath Waas group by encouraging others to join or share the information they learned in the group.

*Overcoming social isolation*

Some participants identified that participation in an Ath Waas group contributed to their sense of belonging and motivated them to “go out.”

*Peer support*

The most common reactions to the advantages and consequences of joining an Ath Waas group concerned peer support. Participants mentioned feeling comfortable and unjudged while listening to or supporting one another, sharing issues, and providing help through a difficult life scenario. As a result of their engagement in the Ath Waas group, they recalled making new friends and developing a sense of community. Participants spoke of reaching out to one another outside of group gatherings and maintaining contact between meetings through regular communication.

*Knowledge related to accessibility*

Participants noted that their involvement in Ath Waas provided a gateway to access services: services provided by the institute, encouragement to see healthcare providers regularly, and information about other services in the community.

**Findings from individual interviews: recommendations for improving Ath Waas groups**

Questions 7 and 8 were intended to gather participant feedback on how to improve Ath Waas. Participants identified three main domains for improvement.

*Format of meeting*

Participants talked about concerns, such as frequency and duration, but they could not agree on the best frequency and duration. Some people saw the need for more people in the groups.

*Leadership, structure, or organization*

Although Ath Waas groups are led by participants, the most popular suggestions for improvement were for more leadership and structure. A leader developed in most groups; however, not all participants shared the leadership position. When the leader was no longer available to lead, groups were destabilized, and as a result of attrition and changes in meeting dates and/or places, groups shrank. Some groups were more successful in defining the types of instructional sessions they wanted than others. Participants expressed a need for more connection with healthcare

professionals and proposed a number of program enhancements.

*Accessibility*

Some participants found it difficult to attend Ath Waas groups on a regular basis. Busy schedules and competing commitments, as well as obstacles, such as transportation and meeting location, were mentioned by participants. Meeting hours were a significant issue for organizing the group session. With example quotations from participants, Table 5 outlines the suggested changes to Ath Waas. Table 5 summarizes the positive health impacts of Ath Waas participation with representative quotes.

**Discussion**

The goal of this study was to see whether structured peer-led community groups could be started successfully in an urban Indian setting and have a good impact on participants’ health.

According to a meta-analysis of 148 studies, having supportive relationships is linked to lower mortality rates.<sup>[8]</sup> Adults who are socially isolated had a two- to fivefold greater death risk than others, according to Berkman and Glass (8). While peer support has been employed in health promotion programs, it has been used more frequently in disease-specific programs.<sup>[9-11]</sup>

Our data suggest that joining an Ath Waas group has advantages, such as increased knowledge, lifestyle

**Table 5: Participants’ suggestions to improve Ath Waas and representative quotes**

Improving Ath Waas	
Format of meeting	Frequency or duration: “I wish we could meet more often”; “I believe it should be longer”; “I would like to meet only once a month” Membership: “Our numbers aren’t as strong as we’d like them to be”; “It would be wonderful if we could get a couple more members”
Organizational structure	Leadership: “With rotating leadership positions, there is no one truly [coordinating] things”; “Not having a lead person may work in Western countries, but I don’t think it works here”; “We have she is the glue that holds everything together.” “It would be difficult if she weren’t [here]”; “We had... a person in charge [who] quit, and everything has very well fallen apart since then” Structure: “More themes”; “more group discussions”; “more exercise sessions”; “return funding for snacks and incentives”; “return funding for snacks and incentives” Organization: “I would place a major emphasis on... giving greater structure and assistance from the Healthcare staff contact person; “[require] a regular check’ is what I would emphasise”
Accessibility	Access: “I can’t attend during the day”; “sometimes I don’t have enough time to space”; “finding the time”; “distance I have to travel to get there”



modification, motivation, social isolation reduction, peer support, and knowledge about accessibility to healthcare services. These findings are consistent with previous research on the impact of peer support groups on health. The “most prominent health behaviors (exercise, weight loss, and improved nutrition)” were positively affected by peer-led initiatives that contribute to community “belonging.”<sup>[12]</sup>

Peer-based interventions contributed to positive health-related behavior change, such as increased physical activity, decreased smoking, increased condom use, and increased completion of advance directives, according to a systematic review of 25 randomized controlled trials assessing health-related behavior change in older adults.<sup>[13]</sup> While the majority of community-based peer support initiatives have focused on a single health behavior, some have been created to build social support or social networks to avoid social isolation.<sup>[14]</sup>

The key themes that emerged from a 2015 research study of a community-based program intended to generate peer support networks were the creation of social networks, the enhancement of well-being, and the provision of empowering services.<sup>[15]</sup> Peer support has also been shown to improve access to primary care services, such as health information, community initiatives, and assistance.<sup>[9,12,15-17]</sup> Furthermore, peer-based interventions have been shown to promote shared achievement by doing, offering role models, and sharing information, resulting in group members feeling satisfied, confident, and accepted.<sup>[18,19]</sup>

Support groups that address interrelated chronic disease prevention behaviors (healthy eating, regular physical activity, monitoring indicators, and social support) within a model of peer support and their impact on health, as opposed to those that focus on a single chronic disease or condition and related specific health behavior, are where this research adds to the literature. Although the benefits of peer support have been thoroughly described in the literature, the empirical evidence on this topic is not conclusive. Weibel *et al.*<sup>[13]</sup> did a systematic evaluation of the evidence regarding the effectiveness of peer-based treatments for specific behavior modification and found conflicting results. Some interventions (exercise, smoking, and condom use) were successful, whereas others (breastfeeding, medication adherence, and women’s health screening) were not. The findings of this study are identical to those of the previous one. Quantitative results from the participant survey suggest that joining an Ath Waas group only resulted in statistically significant improvements in mental health ratings, with possibly positive trends in other health-related metrics. However, thematic analysis of the in-person interviews revealed

that involvement in the *Ath Waas* group had a beneficial impact on participants’ health, especially through peer support and learning or increased knowledge.

Furthermore, because the quantitative data showed no statistically significant improvement, 59 percent of the participants reported a change in behavior. This could be due to the way the survey’s behavior change questions were worded, or it could imply that open-ended qualitative approaches are a superior way to elicit behavior change data. Despite the proportion of participants being unemployed or in a lower-income group, the absence of reported income-related stress (which the researchers had expected from the open-ended question “What has not helped or made it harder for you to stay healthy and feel good?”) was an unexpected finding.

In conclusion, both quantitative and qualitative studies indicate that Ath Waas groups have a considerable positive impact on participants’ mental health. Additionally, participants reported feeling more connected and supported, which could lead to beneficial outcomes in some areas of health, such as participant-reported behavior improvements. It is less known whether Ath Waas helps with measurable metrics, such as blood sugar, blood pressure, weight, and waist circumference. More research is needed to determine whether Ath Waas participation has a long-term effect on these measurable variables.

### Limitation and recommendation

There were several flaws in this research. Our sample was mostly female and came from a single jurisdiction. Male reluctance to seek help for health issues, particularly preventive measures, may explain the low male participation rate, but it also gives an opportunity to investigate ways to involve more men in the intervention. The transferability of findings may be limited as a result of these factors. Furthermore, our sample size was limited; the conclusions are based solely on frequent meetings and self-reported comments, because the qualitative technique used provided in-depth information that could compensate for this constraint. Because the logbooks that tracked blood sugar, blood pressure, weight, and waist circumference were incomplete, we were unable to compare these quantitative indicators over time due to the incomplete logbooks that tracked these self-measured health indicators. Self-reported health behavior improvements (both general and specific) may not accurately reflect genuine behavior change and are susceptible to recall and social desirability biases. In addition, four of the original groups were unable to continue for a variety of reasons (e.g., loss of interest and struggle to schedule meeting times). There were issues

with regular participant attendance, as participants missed meetings when interviews were scheduled, were unavailable, or lost to follow-up, and there were issues with regular participant attendance.

Gustavson *et al.*<sup>[20]</sup> noted the difficulty of high attrition rates in public health intervention research (30–70 percent) in a study similar to this one, which could affect the generalizability of the findings. Researchers attempted to contact those who dropped out, but they were only able to perform a few exit interviews. The demographics of research participants and those who were lost to follow-up differed statistically, and the lack of data from dropouts may have influenced the study's findings. The peer support paradigm utilized in this study was purposefully peer-led, with all participants being peers and health professionals providing direction and support. However, suggestions for more leadership and organization were the most prevalent feedback regarding how to improve Ath Waas. While peer support may provide information, a sense of belonging, and improvements in self-care, there are other ways, both individual and group-based therapies, that may also be effective, and health practitioners must be aware of which may be the best fit for a certain client.<sup>[21,22]</sup> Peer support groups for health improvement may not be suited for or beneficial for everyone, and the peer-led model's perceived lack of support may have contributed to the high attrition rate.

The literature on health promotion has found that interventions focusing on individual lifestyle or behavior change may have limited long-term effects because "health behaviours are influenced by many competing factors: cultural pressures, health literacy, health inequalities, mental capacity, genetic predisposition, and, in the case of smoking, genetic predisposition."<sup>[23]</sup> At the same time, a 12- to 24-month intervention may not be long enough to determine whether the Ath Waas group involvement has long-term health benefits.

Peer support is becoming more frequent not only in the field of health but also in behavioral science as the focus of healthcare shifts from treating disease to promoting health. Ath Waas participation is meant to support health through a variety of health promotion activities, including education, action, access to services, and empowerment, all of which are based on a peer support model. The need for innovative ways to address chronic disease prevention and management in a community challenged by interrelated factors (social determinants of health), such as lower education and income, social isolation, and lack of access to health and recreation services, is driving this community-based research. This study contained a participatory design between the participants and the researchers, as well as direction

and feedback from community residents. Ath Waas group participation was designed to be long term, with members and groups lasting long after the study project ends. This may be preferable to other chronic disease preventive programs with a set duration (6–12 weeks) or centered on a specific chronic disease or behavior change.

## Conclusion

According to the findings of this study, *Ath Waas* was a useful intervention for achieving statistically significant changes in mental health. Peer support, increased knowledge, lifestyle change, motivation, overcoming social isolation, and awareness of accessibility to healthcare-related services are among the benefits of participating in an Ath Waas group, according to the findings of the qualitative investigation, while more research is needed to confirm the findings.

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## Ethical approval and consent to participate

The study was approved by the Ethical Committee, SKIMS, Soura, Srinagar. The participants were asked for informed consent before proceeding with the data collection.

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## Conflicts of interest

There are no conflicts of interest.

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