AUT NATIONAL INSTITUTE FOR STROKE AND APPLIED NEUROSCIENCES

Newsletter

ISSUE 5, March 2018

WELCOME TO THE 5TH NEWSLETTER OF THE RIBURST STUDY (REDUCING THE INTERNATIONAL BURDEN OF STROKE USING MOBILE TECHNOLOGY)

PROGRESS OF THE STUDY

The study is progressing well with more than 11,550 participants.

Demographic data for the participants are as below:

Mean Age
45.57 (SD 19.41)

Sex
Female 48.3%
Male 51.7%

Ethnicity
European 76.7%
Malay/Indo/SEA 5.1%
African 5.7%
Latin American 1.9%
Indian 4.1%
Chinese 1.2%
Other 5.3%

Country
Russia 44.6%
New Zealand 8.3%
Malaysia 6.5%
Italy 5.8%
Nigeria 4.8%
United Kingdom 2.4%
United States 2%
Brazil 3.9%
Belarus 1.7%
Australia 1.4%
India 3.7%
Other 14.9%

Download numbers
125,000

What's inside

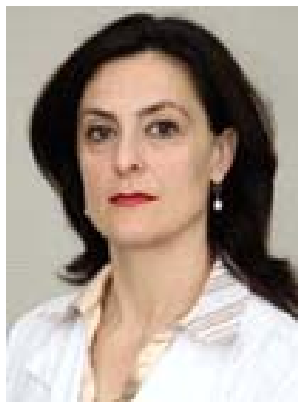
Researcher profile

Assoc. Prof. Dr Klara Dokova
Faculty of Public Health
Medical University “Prof. Dr Paraskev Stoyanov”, Varna,
Bulgaria

Klara Dokova, MD, MPH, PhD is a Vice-Dean of the Faculty of Public Health at the Medical University “Prof. Dr Paraskev Stoyanov”, Varna, Bulgaria with over 15 years of academic experience.

Klara has a medical background and a Master’s Degree in Public Health from Maastricht University, the Netherlands. Her PhD is in the field of epidemiology of non-communicable diseases, and more specifically on the prevalence, awareness, treatment and control of blood pressure in Bulgaria. Her research interests also include inequalities in health with a focus on geographical, urban-rural and gender inequalities, training and professionalisation in Public Health, sociology of health and disease.

In the framework of an international collaborative research project “Varna Diet and Stroke Study” she was part of the team that initiated the first populational stroke register in a country from Central and Eastern Europe, that functioned in the period 1999-2002. The register proved the existence of major urban rural inequalities in terms of stroke risk.



Prof. Dr Silva Andonova
Vice Director of University Hospital “St. Marina”
Medical University, “Prof. Dr Paraskev Stoyanov”, Varna,
Bulgaria

Prof. Silva Andonova, is responsible for the treatment and diagnostic activities of the University hospital at the Medical University of Varna, Bulgaria.

She is also head of Second Clinic of Nervous Diseases with ICU and Stroke Unit at University Hospital "St. Marina" - Varna, a lecturer at the Department of Neurology and Neuroscience at MU - Varna and a national consultant on interventional neurology. Recently she was appointed as the National Representative of Bulgaria in the project of the European Stroke Organisation (ESO) - ESO EAST for 2018 and 2019. Silva’s doctoral thesis is in the field of management of stroke.

The wide public health and neurological communities in Bulgaria realise that stroke poses the highest burden on the health of the Bulgarian population which requires the mobilisation of all available resources and existing tools in order to stop the negative trends.

Now, at the beginning of 2018, the Faculty of Public Health and the University hospital of the Medical University Varna are joining forces with the team of the RIBURST study for the start of the evaluation of the Bulgarian version of the Stroke Riskometer. After the pilot phase a strong advocating process is planned for the national endorsement of that innovative primary preventive strategy.

Translated versions of the app

Please refer to the NISAN website to see details of the current translations available.

- iOS version: https://nisan.aut.ac.nz/Stroke-Riskometer/available-languages
- Pro version: https://nisan.aut.ac.nz/Stroke-Riskometer/stroke-riskometer-pro-version

- The Croatian translation should be live very soon.
- Czech translations have been sent to the developers and we should be seeing the first prototypes shortly.
- The Farsi translations have been released on both Apple and Android platforms.
- Japanese translations are underway.
- Bulgarian translations: We hope to have a first prototype available in a few months, which will then be tested by the Bulgarian collaborators.

ANDROID APP ON Google play

Download on the App Store

Releases and app updates

New English iOS and Android versions
Based on the feedback that has been received, the iOS English version of the app has been updated. A new version (English) has recently been released with information about vascular age and the addition of a basic goal-setting section.

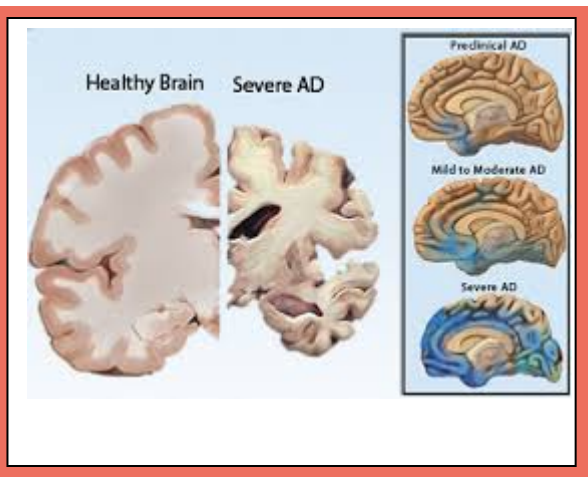
New Chinese iOS and Android versions
Based on the feedback that has been received, the new Mandarin version of the app has a reduced number of videos in the Pro version. As Google is not allowed in China, the Chinese versions of the app are now available on the Baidu website.

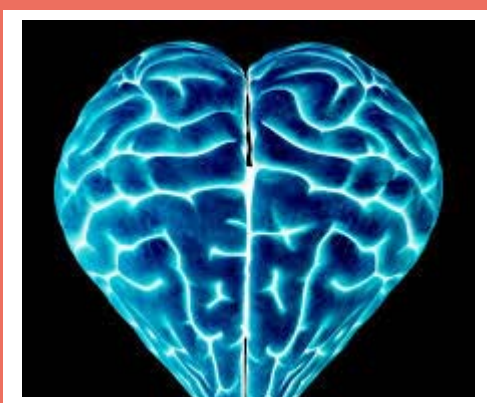
New Russian iOS and Android versions
The new Russian versions of the app include better (simplified) questions. However, there are still some issues (comments from users), which need to be addressed.

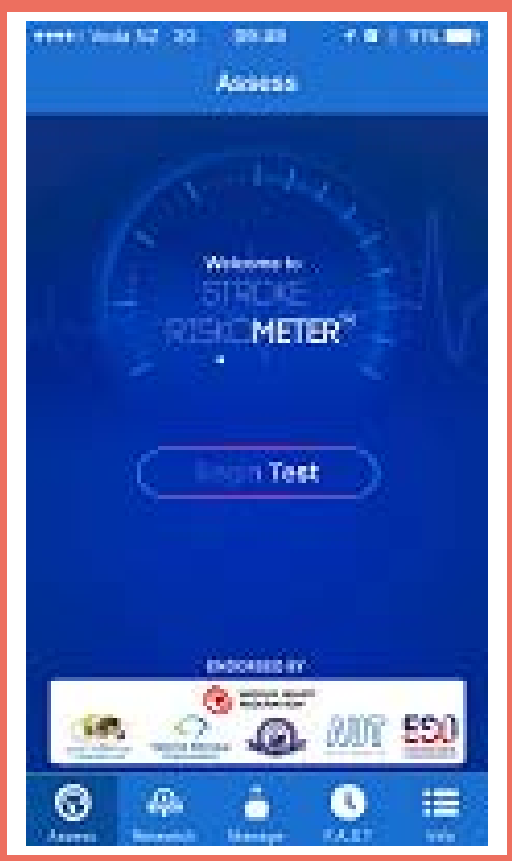
Proposed new releases
Discussions are underway to purchase the app/software for Kuwait, Brunei and Kazakhstan.

The MARS (Mobile Applications to Reduce Stroke) pilot Randomised Control Trial
This study is based on the Stroke Riskometer (the same as RIBURST). This trial is progressing well in New Zealand. Recruitment has been completed and assessments have finished. Analyses are now complete and the manuscript is being prepared.

See the poster attached to the end of this newsletter – these finding were presented at the International stroke Conference in Los Angeles, in January.







Media releases and news

Editable advertising posters
There are advertising posters available for download in English, French and Russian, for you and for recruitment of study participants in your area. Please see: https://nisan.aut.ac.nz/Stroke-Riskometer/downloadable-posters. You can modify these as you see fit, e.g. by adding the QR of the app in your language and adding local details.

NISAN Stroke Riskometer webpage
Remember, the NISAN Stroke Riskometer webpage contains a lot of relevant information. See: https://nisan.aut.ac.nz/Stroke-Riskometer.

French media campaign
Two new posters have been posted in 242 railway stations within the Paris area, and French collaborators have targeted all regional Health Agencies of France. These posters were also posted on 21 January, for 7 days, in 552 railway stations of the region of Paris called "Ile de France", with 12 million inhabitants. The first poster represents a young man and the 2nd a young woman, because stroke is a new problem in young people < 55 years, asking the question about stroke and the interest to download the Riskometer. The French collaborators hope that this campaign will draw the attention of their Ministry of Health. Copies of the posters can be found at the end of this newsletter.

Last year other extremely successful Stroke Riskometer media campaigns were held in Italy and Russia.

Developments from Australia
The Stroke Riskometer has been used as part of a recent hospital and public education/awareness project. The researchers have put a lot of work into this project and they hope to see more participation on the app and for RIBURST from Australia. The Ballarat Base Hospital is a regional hospital in Western Victoria, Australia, which serves a community of approximately 250,000 people, spread out over 48,000 km2.

In stage one, they introduced the Stroke Riskometer and the RIBURST study to hospital staff, using the hospital-wide Grand Ward Round as their initial platform. This was in November 2017, and drew an audience of approximately 80 people from across the hospital. They then continued with 6 sessions targeting nurses, who make up approximately 80% of staff at the BHS. In addition, they used the Western Victoria Primary Health Network to reach out the over 300 general practitioners in the region about the app and its potential use. Their rationale was to introduce the app to their colleagues, to encourage them to use the app to determine their own risk and disseminate the information to their friends and family, and subsequently to their patients.

They introduced the tag line: ‘Find your 1 in 6’, a play on the WSO stroke awareness ‘1 in 6’ slogan, to encourage staff to reach out to at least 6 people who matter to them.

In stage two, they asked for volunteers amongst hospital staff and medical students to speak to visitors about the app, as they pass through the public areas of the hospital.

The third stage, the most ambitious part of the programme, is to reach out to the community by getting local businesses to help promote the app. Researchers spoke to business owners in the past, about putting up posters in their shop windows to increase stroke awareness, and were encouraged by the positive response. They will also speak to the local radio station and newspapers. They hope to be able to speak to schoolchildren about the app, to encourage them to help older relatives to download the app and complete their assessment.

In the early part of the year, a stroke survivor volunteered to help promote the app by being the ‘face’ of the app in Ballarat. She is currently an in-patient for rehabilitation and insists that every visitor to her room downloads the Stroke Riskometer and completes their assessment in her presence!

The researchers hope to capitalise on the strong spirit of community, a hallmark of regional Australia, to promote awareness and use of the Stroke Riskometer. They hope that efforts will pay off in the form of increased downloads and assessments using the app, and a long-term improvement in the health of their community.

Contact information

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https://nisan.aut.ac.nz

MOBILE APPLICATION TO REDUCE RISK OF STROKE: FINDINGS FROM THE MARS PILOT TRIAL

Rohit Bhattacharjee, Rita Krishnamurthi, Priya Parmar, Valery L. Feigin

AUT UNIVERSITY NEW ZEALAND

Reducing stroke risk behaviors is associated with reduced stroke incidence. The Stroke Riskometer™ mobile phone App is designed to help people to reduce their risk by providing their absolute and relative risk of stroke, identifying their individual risk factors and providing information to help reduce their risk of stroke.

Aims

The Mobile Application to Reduce the Risk of Stroke (MARS) study was a pilot trial aimed to:

- Test the efficacy of the Stroke Riskometer™ app as a tool for health behaviour modification and stroke education.
- Inform on feasibility issues of conducting a full-scale trial, such as recruitment, acceptability of the intervention and sample size calculation to evaluate effectiveness of the app-based intervention.

Methods

The MARS trial was a pragmatic pilot, open-label, 2-arm prospective RCT. Consented participants were randomly assigned to the intervention arm using online minimization randomization. Usual care participants were not actively informed about the App. Figure 1 shows the recruitment process.

Changes in lifestyle behavior were measured at baseline, 3- and 6-months and assessed using Life's Simple 7 (LS7) questionnaire as recommended by the American Heart Association. Questions about stroke symptoms and risk factors were asked to measure awareness levels.

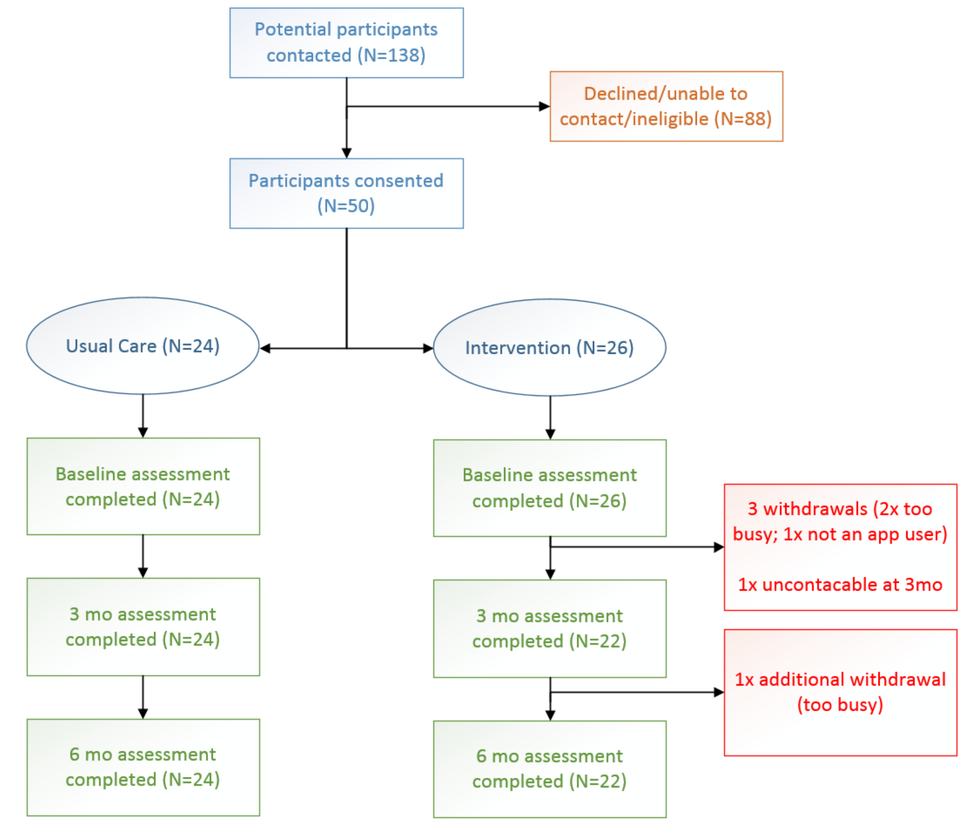

Figure 1: MARS recruitment and follow ups

Results

Recruitment was feasible, with a recruitment rate of 70% and low rate of withdrawals.

Some of the demographic and clinical baseline differences are shown in table 1, figure 2 and figure 3.Table 2 shows a positive trend in the overall LS7 score for those in the intervention group.

Table 1: Baseline differences between groups

	Intervention group	Usual care group
Age (Mean (SD))	46.9 (14.2)	43.2 (14.4)
Sex (Female; %)	57.7	62.5
SBP (Mean (SD))	126.7 (13.9)	126.0 (12.5)
BMI (Mean (SD))	37.5 (8.2)	35.4 (7.6)

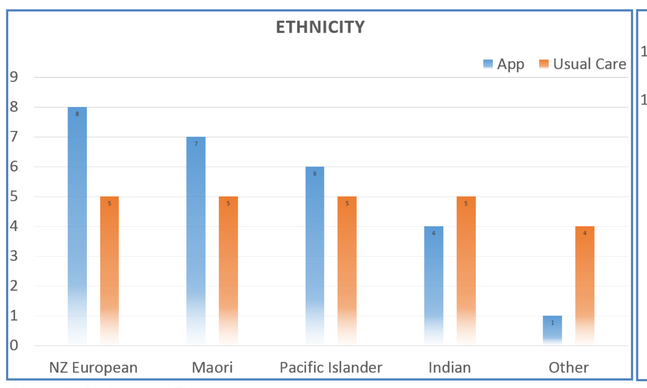

Figure 2: Participant Ethnicity

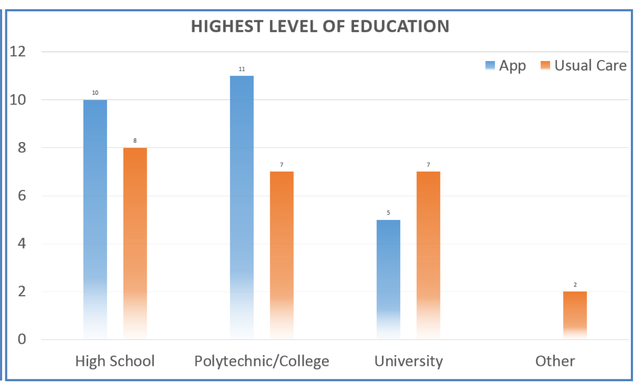

Figure 3: Participant Education level

Table 2: Mean LS7 change between baseline and 6mo

Group	Time point	Overall LS7 score		
		N(%)	Mean (SD)	Range
Overall	Baseline	50 (98%)	7.06 (2.15)	[3,12]
	Six months	50 (70%)	7.23 (2.40)	[1, 11]
	Difference between baseline and 6 months	50 (70%)	-0.03 (1.50)	[-3,3]
	Mean difference between baseline and 6 months (mean $_{6mo}$—mean $_{baseline}$)		0.17 (improvement)	
App	Baseline	26 (96.2%)	6.84 (2.10)	[4,12]
	Six months	26 (57.7%)	7.13 (2.80)	[1,11]
	Difference between baseline and 6 months	26 (57.7%)	-0.13 (1.36)	[-3,12]
	Mean difference between baseline and 6 months (mean $_{6mo}$—mean $_{baseline}$)		0.29 (improvement)	
Usual Care	Baseline	24 (100%)	7.29 (2.24)	[3,12]
	Six months	24 (83.3%)	7.30 (2.13)	[4,11]
	Difference between baseline and 6 months	24 (83.3%)	0.05 (1.64)	[-3,3]
	Mean difference between baseline and 6 months (mean $_{6mo}$—mean $_{baseline}$)		0.01 (no change)	
Difference between App and Usual Care	Baseline (usual care — app)		0.45 (2.24)	
	Six months (usual care — app)		0.17 (2.13)	
	Difference between baseline and 6 months (usual care — app)		0.18 (1.64)	
	Mean difference between baseline and 6 months (mean $_{6mo}$—mean $_{baseline}$)	The difference between usual care and the app group reduced to 0.28 between baseline and six-months		

Positive feedback was received from study participants for the App as a tool to know more about stroke and take action for better health.

Conclusions

- The findings suggest the Stroke Riskometer is a feasible intervention for stroke awareness and prevention.
- These results indicate that a full scale RCT to test the effectiveness of the app is warranted.

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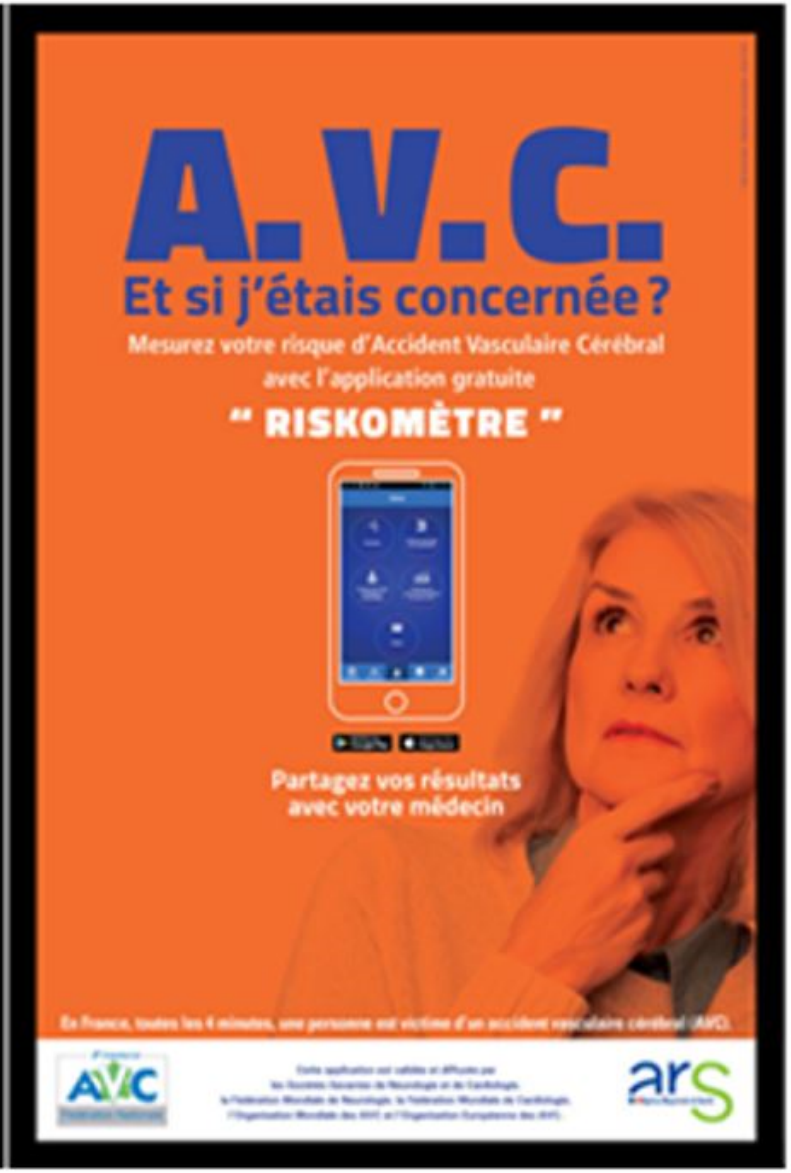
A.V.C.
Et si j'étais concerné ?
Mesurez votre risque d'Accident Vasculaire Cérébral
avec l'application gratuite
" RISKOMÈTRE "
Partagez vos résultats
avec votre médecin
En France, toutes les 4 minutes, une personne est victime d'un accident vasculaire cérébral (AVC).
AVC
ars


A.V.C.
Et si j'étais concernée ?
Mesurez votre risque d'Accident Vasculaire Cérébral
avec l'application gratuite
" RISKOMÈTRE "
Partagez vos résultats
avec votre médecin
En France, toutes les 4 minutes, une personne est victime d'un accident vasculaire cérébral (AVC).
AVC
ars