

The Incidence and Influencing factors of functional disability in Chinese Patients with Rheumatoid Arthritis

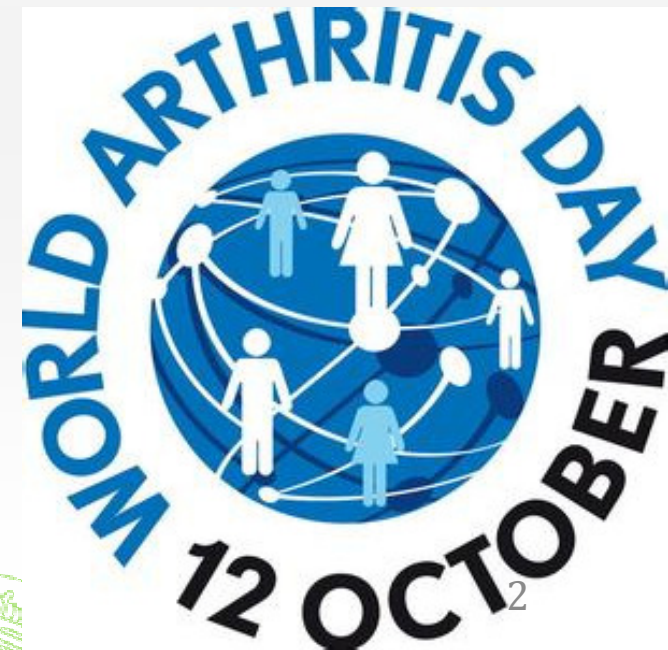
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Background



Rheumatoid Arthritis: RA

- ◆ A chronic, autoimmune and Invasive arthritis
- ◆ Immortal tumor:
 - ◆ Disability, Discomfort, Dollar cost, Drug toxicity, Death

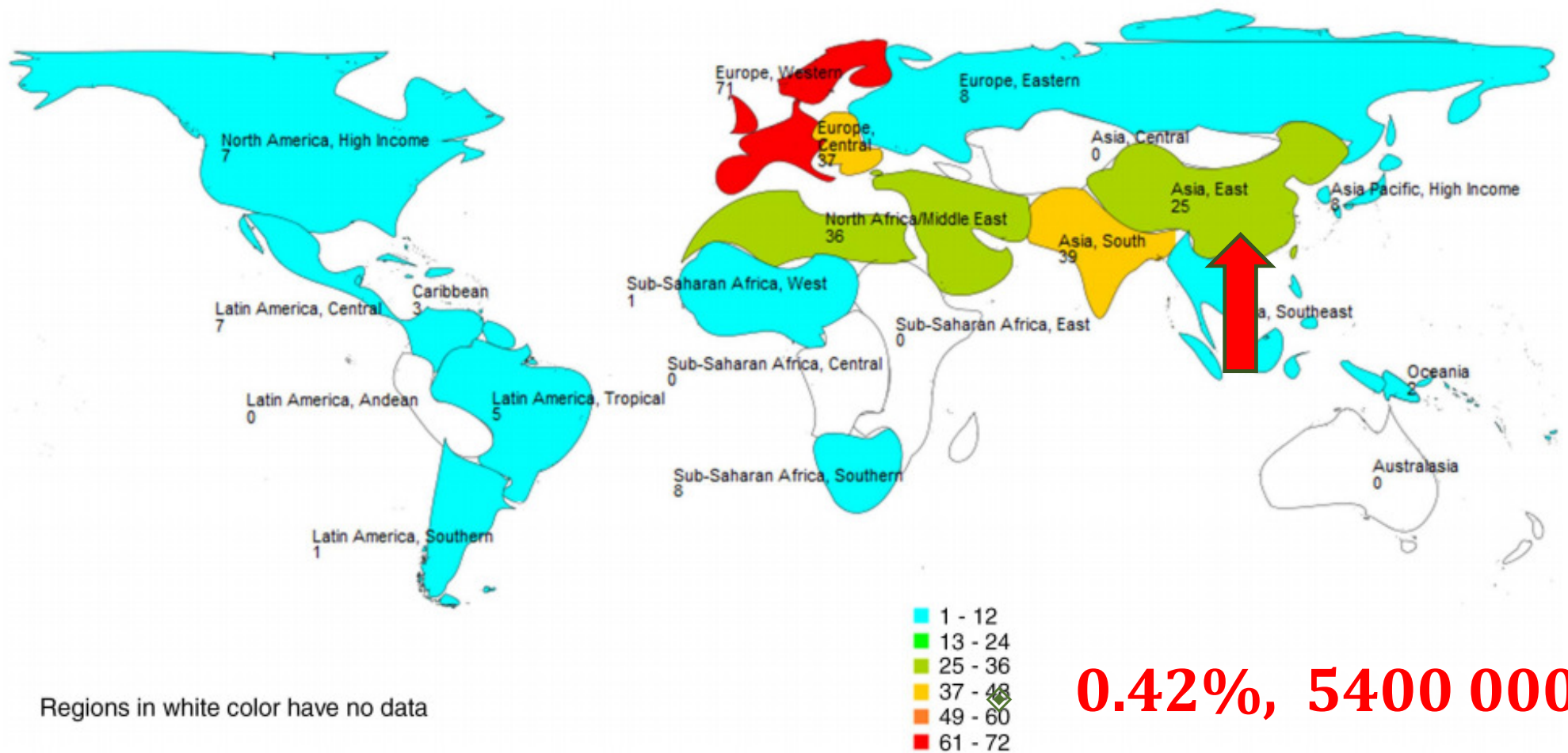


Figure 1 Prevalence data count for rheumatoid arthritis DisMod-MR analysis, Global Burden of Disease 2010 study.

Cross M. Smith E. Hoy D. et al. *Annals of the Rheumatic Diseases*. 2014,73(7):1316-22.

Zeng XF. et al. *Chinese Journal of Evidence-based*. 2013,13 (3): 300-7.

Background

- **Morning stiff**
- **Pain**
- **Tender**
- **Swelling**
- **Functional disability rate: 20% in 1 year, 60% in 10 years**



functional disability--feet



2 years

functional disability--hands



>20 years

Purpose



- ◆ Investigate the **incidence** of functional disability in Chinese patients with RA
- ◆ Analyze **influencing factors** of functional disability in Chinese patients with RA
- ◆ Provide **reference for intervention** on functional disability of RA

Methods



- ◆ **A cross-sectional survey**
- ◆ **Convenience sampling** in Rheumatic Outpatient in West China Hospital
- ◆ **September to December 2013**
- ◆ **Demographic data, social support, pain, fatigue, functional disability**

measurements -1



◆ Demographic data

- ◆ age
- ◆ gender
- ◆ marital status
- ◆ education level
- ◆ residence
- ◆ family monthly income per capita (FMIPC)
- ◆ medical payment forms
- ◆ disease duration
- ◆ hospitalized times
- ◆ total cost of treatment (TCT)

measurements -2

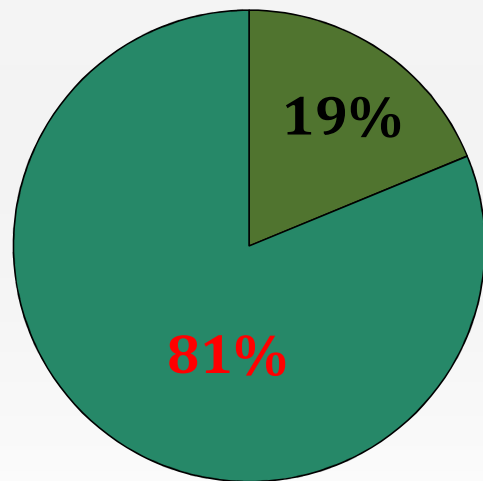


- ◆ **Social support**
 - ◆ **Social Support Rating Scale**, Higher scores indicate more social support
- ◆ **Pain, fatigue**
 - ◆ **Visual Analog Scale**
- ◆ **Functional disability**
 - ◆ **Health Assessment Questionnaire-Disability Index (HAQ-DI)**, Higher score of HAQ-DI indicates more damage of physical function

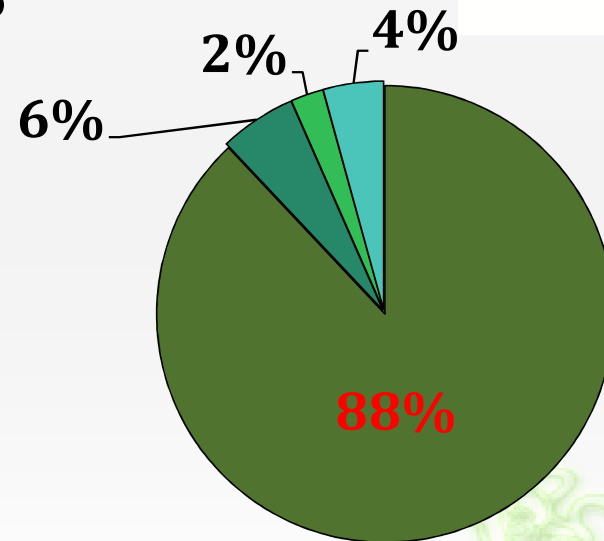
Results-1

Statistical description

◆ **607** of 653 participants

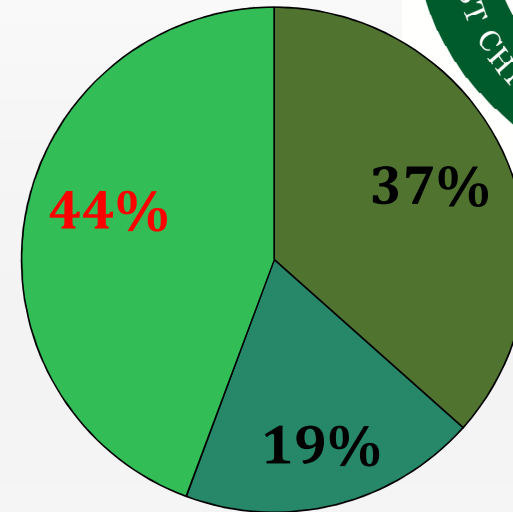
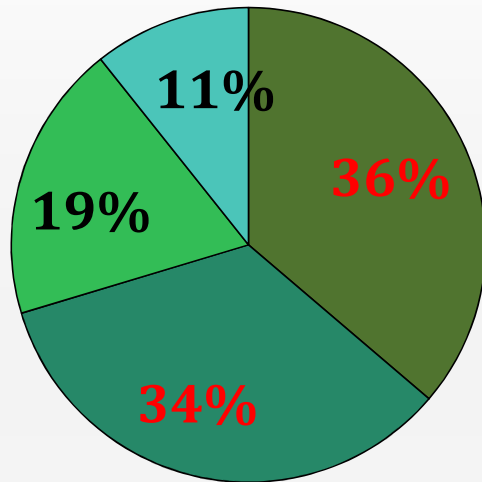


■ male ■ female



■ married ■ single
■ divorced ■ widowed

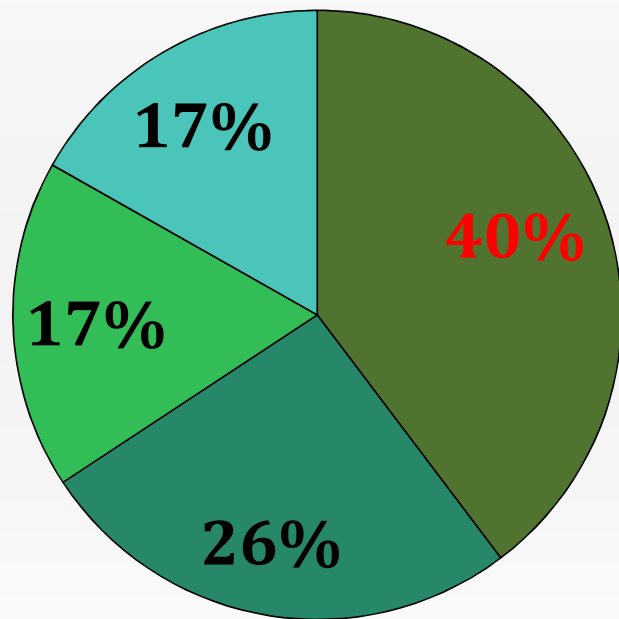
Statistical description



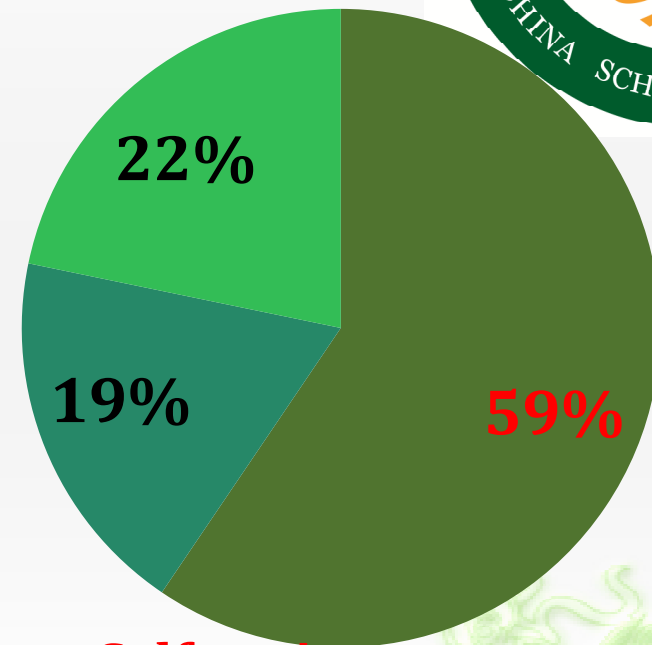
- **Primary school or below**
- **Junior high school**
- **Senior high school**
- **College or above**

- **Urban**
- **Suburban**
- **Rural**

Statistical description



- <1000RMB
- 1000-2000RMB
- 2000-3000RMB
- >3000



- Self paying
- NRCM
- Medical insurance

Statistical description



Variables	Mean±SD or Median	Range
Age (years)	50	18, 88
Disease duration (month)	50	1, 492
VAS of Pain	5.25 ± 2.91	0, 10
VAS of Fatigue	4.15 ± 2.87	0, 10
Social support rating scale	40.67 ± 7.68	20, 58

Statistical description

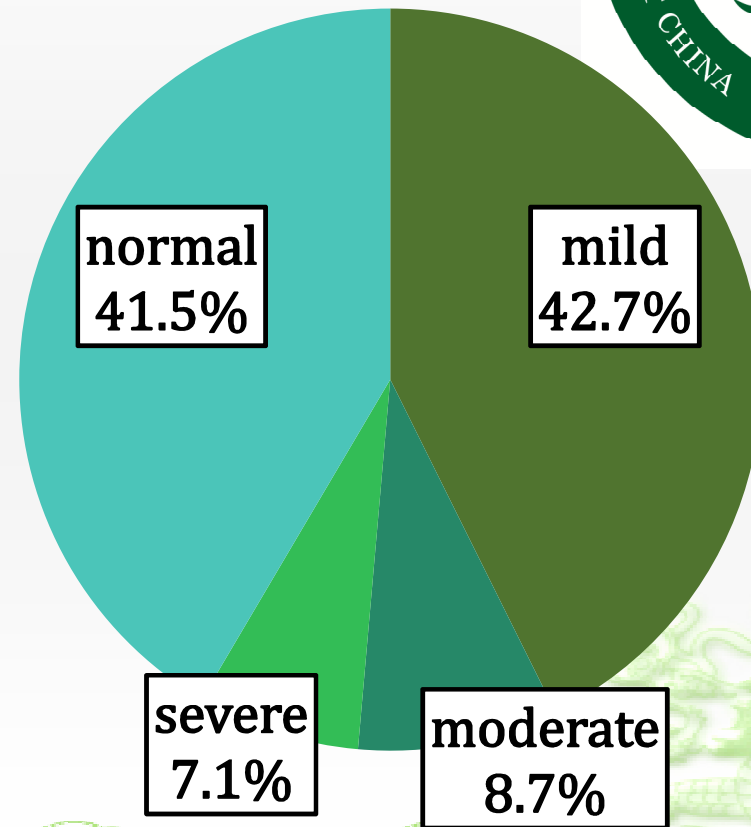


	Mean	SD
HAQ-DI	0.665	0.675
dressing and grooming	0.679	0.788
arising	0.539	0.695
eating	0.479	0.719
walking	0.565	0.719
hygiene	0.720	0.862
reaching	0.997	1.039
gripping	0.651	0.779
other activities	0.687	0.792

Statistical description



- ◆ **58.5%** of patients had functional disability.



Results-2



Univariate analysis

Variable	HAQ-DI	P
Gender	t=1.386	0.166
Marital status	F=1.500	0.213
Education level	F=15.682	<0.001
Residence	F=12.647	<0.001
FMIPC (Yuan)	F=10.364	<0.001
Medical payment forms	F=0.992	0.189

FMIPC.family monthly income per capita

Univariate analysis



		HAQ-DI		
Education level	Primary school or below	0.86 ± 0.68	F=15.682	<0.001**
	Junior high school	0.66 ± 0.68		
	Senior high school	0.51 ± 0.63		
	College or above	0.30 ± 0.44		
Residence	Urban	0.49 ± 0.64	F=12.647	<0.001**
	Suburban	0.71 ± 0.70		
	Rural	0.79 ± 0.67		
family monthly income per capita (Yuan)	<1000	0.79 ± 0.64	F=10.364	<0.001**
	1000-2000	0.70 ± 0.71		
	2000-3000	0.62 ± 0.74		
	>3000	0.36 ± 0.49		

Table 3 Multivariate regression of functional disability of patients with rheumatoid arthritis (N=607, Adjusted R²=0.384)

Included variables	B	P	95% Confidence internal (95%CI)
Suburban	0.125	0.047*	0.002,0.248
Rural	0.154	0.006*	0.045,0.263
Age	0.012	<0.001**	0.009, 0.016
Disease duration	0.000	0.007*	0.000, 0.001
Hospitalized times	0.025	0.001*	0.011, 0.039
Overall cost for treatment	0.002	<0.001**	0.001, 0.002
Pain	0.094	<0.001**	0.079, 0.109
Subjective social support	-0.019	<0.001**	-0.028, -0.010
Available social support	-0.024	0.019*	-0.044, -0.004

Results-Multivariate regression



- ◆ **Adjusted $R^2=0.384$**
- ◆ **Pain, age, disease duration, total cost for treatment and hospitalized times was **negative** factors**
- ◆ **Subjective and available social support was **positive** factors**

Conclusion



- ◆ **Functional disability is a common symptom in our study.**
- ◆ **When providing patient education, nurses should consider more about patients with RA who live in rural residence, have a low level of income and education and long disease duration.**
- ◆ **Pain management with a sound social support system is a possible good intervention**



**Thank you
for your attention !**