Dokumentation der Kalibrierung

1

Freundschaftsansteckung:

if friends

percentage = count(p -> p.state == depressed, person.friends)/length(person.friends)

rate += para.rate\_friends \* percentage

end

Optimierung im Hinblick auf folgende Faktoren:

Rr nur parents und friends

Rates alle

function evaluationrr(sim, data\_rr\_par, data\_rr\_fr, data\_rr\_ac, data\_rr\_sp, data\_rr\_ch)

#Evaluation der Risk Ratios

rr\_par, rr\_fr, rr\_ac, rr\_sp, rr\_ch = toriskratio(sim)

#meansquaredistance

return ((data\_rr\_par - rr\_par)^2 + (data\_rr\_fr - rr\_fr)^2 ) /2

end

function evaluationrates(sim, data\_prev, data\_rate\_parents, data\_rate\_friends, data\_rate\_ac, data\_rate\_children, data\_rate\_spouse)

#Evaluation der Raten

return ((data\_prev - ratedep(sim))^2 + (data\_rate\_parents-ratedep\_parents(sim))^2 + (data\_rate\_friends - ratedep\_friends(sim))^2 + (data\_rate\_ac-ratedep\_ac(sim))^2 + (data\_rate\_spouse - ratedep\_spouse(sim))^2 )/5

end

qual\_rr\_new\_paras = eval\_rr\_multipleseeds(2.5, 3.5, 1.2, 1.2, 1.5, new\_paras, d\_sum\_m, d\_sum\_f, d\_sum\_kids, data\_grownups, data\_kids)

qual\_rates\_new\_paras = eval\_rates\_multipleseeds(0.08, 0.26, 0.32, 0.12, 0.12, 0.26, new\_paras, d\_sum\_m, d\_sum\_f, d\_sum\_kids, data\_grownups, data\_kids)

function randpara()

return Parameters(prev = rand(), rate\_parents= rand(), rate\_friends=rand(), rate\_ac = rand(), rate\_child = rand(), rate\_spouse = rand(), h= rand(), b=0.1)

end

Schritte: 60

0.00889348247815578

0.00889348247815578

0.00889348247815578

NaN

NaN

NaN

step 60

die optimalen Parameter (RR) sind Folgende: Parameters(0.38025146189168024, 0.51, 0.45, 0.5, 0.2, 0.1, 0.6762833399112179, 0.9934689965425696, 0.11382471860579069, 0.7955740706007999, 0.2212267465572888, 1000, 300, 50.0, 15.0, 85, 0.1, 0.06661366921577083, 1.0)

prev 0.381

prev parents 0.4491525423728814

prev friends 0.3807615230460922

prev ac 0.381

prev spouse 0.3891402714932127

prev children 0.3897058823529412

avg risk 0.31323561601506866

rr parents 1.1491935652511531

rr fr 1.7866600441874507

rr sp 1.089561718999234

rr ch 1.108390325988113

die optimalen Parameter (rates) sind Folgende: Parameters(1.0, 0.51, 0.45, 0.5, 0.2, 0.1, 0.0, 0.1592414855191019, 0.08864769141913073, 0.36327089934617296, 0.31730671000065, 1000, 300, 50.0, 15.0, 25, 0.1, 0.0, 1.0)

prev 0.169

prev parents 0.20512820512820512

prev friends 0.16754478398314016

prev ac 0.169

prev spouse 0.32432432432432434

prev children 0.265625

avg risk 0.13169813627833526

rr parents 0.7711276374714696

rr fr 1.3668817616516056

rr sp 2.2434849481513317

rr ch 2.329434222343845

Qualitätsplot:

Ein Bild, das Text, Reihe, Diagramm, Screenshot enthält.

Automatisch generierte Beschreibung

**Ergebnis des Durchgangs mit den gleichen Parametern:**

prev 0.169

prev parents 0.20512820512820512

prev friends 0.16754478398314016

prev ac 0.169

prev spouse 0.32432432432432434

prev children 0.265625

avg risk 0.13108077518000288

rr parents 0.7698573202880361

rr fr 1.3679524134681391

rr sp 2.2529568789129906

rr ch 2.339314150707809

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Alles gleich geblieben aus dem letzten Durchgang

Output der drei besten Lösungen:

die Parameter (RR) sind Folgende: Parameters(0.840672168193832, 0.51, 0.45, 0.5, 0.2, 0.1, 0.7689208293029146, 0.26468938185792734, 0.3855941217137754, 0.9832711495681464, 0.2688446598344495, 1000, 300, 50.0, 15.0, 1, 0.1, 0.628025975203895, 1.0)

prev 0.367

prev parents 0.43119266055045874

prev friends 0.36736736736736736

prev ac 0.367

prev spouse 0.4144144144144144

prev children 0.3918918918918919

avg risk 0.31778911276802163

rr parents 1.1215049323551167

rr fr 1.115045907664258

rr sp 1.0807423389271906

rr ch 1.0267535583172944

die Parameter (rates) sind Folgende: Parameters(1.0, 0.51, 0.45, 0.5, 0.2, 0.1, 0.14780920407627063, 0.2456791418744272, 0.06191358224149607, 0.8208603258800828, 0.09998178804251638, 1000, 300, 50.0, 15.0, 25, 0.1, 0.0, 1.0)

prev 0.153

prev parents 0.26666666666666666

prev friends 0.15614973262032086

prev ac 0.15315315315315314

prev spouse 0.25263157894736843

prev children 0.3088235294117647

avg risk 0.1185544195077149

rr parents 1.5339656143075922

rr fr 1.3276054440134863

rr sp 1.700191130776623

rr ch 2.999788821461393