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DANSK PSYKIATRISK SELSKABS  
ÅRSMØDE



HOTEL COMWELL, KOLDING  
2.-4. FEBRUAR 2017

PROGRAM & ABSTRACTS

2017

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# INDHOLDSFORTEGNELSE

1. PROGRAM FOR DPS' ÅRSMØDE, 2.-4. FEBRUAR 2017, HOTEL COMWELL, KOLDING.....	4
2. SYMPOSIER .....	6
Torsdag d. 2. februar 2017 .....	6
1A: Vold og drab på bosteder ved Mette Brandt-Christensen.....	6
2A: Psykiatrisk diagnostik – i går, i dag og i morgen ved Julie Nordgaard.....	6
3A: Mortalitet og antipsykotika – hvad ved vi? ved Jimmi Nielsen.....	7
1B: Fortsat: Vold og drab på bosteder ved Mette Brandt-Christensen.....	8
2B: Fortsat: Psykiatrisk diagnostik – i går, i dag og i morgen ved Julie Nordgaard.....	8
3B: Talentrekruttering og studenterforskning ved Christina Blanner Kristiansen .....	9
Fredag d. 3. februar 2017 .....	10
4A: Psykopatologi hos voksne med Aspergers syndrom og skizotypisk sindslidelse: Forskelle og ligheder ved Maria Nilsson.....	10
5A: Infektioner og inflammations rolle ved skizofreni: Fra registerstudier til inddragelsen af lumbalpunktur i differentialdiagnostisk øjemed ved Ole Köhler-Forsberg .....	11
4B: Fortsat: Psykopatologi hos voksne med Aspergers syndrom og skizotypisk sindslidelse: Forskelle og ligheder ved Maria Nilsson.....	12
5B: Psykiatriens rødder – i videnskab, filosofi, historie og samfund ved Per Vestergaard .....	12
6A: Pontoppidan I - foredragskonkurrence.....	13
6B: Pontoppidan II – foredragskonkurrence.....	13
Lørdag d. 4. februar 2017 .....	20
At fylde 18 år og få ændret sin diagnose .....	20
3. ABSTRACTS TIL POSTERSESSIONEN .....	21

# 1. Program for DPS' årsmøde, 2.-4. februar 2017, Hotel Comwell, Kolding

Torsdag den 2. februar 2017			
11.00 - 12.00	Ankomst/registrering		
12.00 - 13.00	Frokost		
13.00 - 13.15	Velkomst v. formand Torsten B. Jacobsen.		
13.15 - 14.30	Time Bombs and Tidal Waves Sir Simon Wessely		
14.30 - 15.30	Postervandring v. DPS' Forskningsudvalg		
15.30 - 16.00	Kaffe		
16.00 - 16.55	Symposier:		
	<b>Symposium 1A:</b> Vold og drab på bosteder Mette Brandt-Christensen	<b>Symposium 2A:</b> Psykiatrisk diagnostik – i går, i dag og i morgen Julie Nordgaard	<b>Symposium 3A:</b> Mortalitet og antipsykotika – hvad ved vi? Jimmi Nielsen
16.55 – 17.05	Pause (og mulighed for at skifte til andet symposium)		
17.05 – 18.00	Symposier, fortsat:		
	<b>Symposium 1B:</b> Vold og drab på bosteder Mette Brandt-Christensen	<b>Symposium 2B:</b> Psykiatrisk diagnostik – i går, i dag og i morgen Julie Nordgaard	<b>Symposium 3B:</b> Talentrekruttering og stu- denterforskning Christina Blanner Kristiansen
19.00 -	Middag		

## Fredag den 3. februar 2017

09.00 – 09.55	Symposier:		
	<b>Symposium 4A:</b> Psykopatologi hos voksne med Aspergers syndrom og skizotypi Maria Nilsson	<b>Symposium 5A:</b> Infektioner og inflammationsrolle ved skizofreni: Fra registerstudier til inddragelsen af lumbalpunktur i differentialdiagnostisk øjemed Ole Köhler-Forsberg	<b>Symposium 6A:</b> Pontoppidan foredragskonkurrence
09.55 – 10.05	Pause (mulighed for at skifte til andet symposium)		
10.05 – 11.00	Symposier, fortsat:		
	<b>Symposium 4B:</b> Psykopatologi hos voksne med Aspergers syndrom og skizotypi Maria Nilsson	<b>Symposium 5B:</b> Psykiatriens rødder Per Vestergaard	<b>Symposium 6B:</b> Pontoppidan foredragskonkurrence
11.00 – 11.15	Kaffe		
11.15 – 12.45	Præsentation af årets videnskabelige afhandlinger v. DPS' Forskningsudvalg		
12.45 – 13.30	Frokost		
13.30 – 14.45	Præsentation af årets videnskabelige afhandlinger v. DPS' Forskningsudvalg, fortsat		
15.00 – 16.00	Hundene Gør, men Karavanen Drager Videre Povl Munk Jørgensen, æresmedlem		
16.00 – 16.30	Kaffe		
16.30 –	Generalforsamling		
19.30 -	Velkomstdrink		
20.00 -	Festmiddag med uddeling af priser for postere og Pontoppidankonkurrencen		

## Lørdag den 4. februar 2017

10.00 - 10.55	<b>At fylde 18 år og få ændret sin diagnose</b> Forstås begrebet psykose forskelligt i børne-, ungdoms- og voksenpsykiatrien? Er der faktorer på spil som voksenpsykiatere ikke kender til?
10.55 - 11.05	Pause
11.05 - 12.00	<b>At fylde 18 år og få ændret sin diagnose - fortsat</b> Forstås begrebet psykose forskelligt i børne-, ungdoms- og voksenpsykiatrien? Er der faktorer på spil som voksenpsykiatere ikke kender til?
12.00 – 13.00	Frokost

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## 2. Symposier

Torsdag d. 2. februar 2017

### 1A: Vold og drab på bosteder ved Mette Brandt-Christensen

Indenfor en periode på 4 år har fem medarbejdere på bosteder og forsorgshjem mistet livet som følge af vold fra alvorligt psykisk syge beboere. Misbrug har spillet en afgørende rolle i 4 af de 5 tilfælde. Psykiatriens rolle og især samarbejdet mellem bosteder / forsorgshjem, psykiatri, kriminalforsorg m.fl. er blevet kritiseret i efterforløbet af hver af de meget ulykkelige hændelser. Der skal nu etableres særlige socialpsykiatriske afdelinger som led i satspuljepartiernes handlingsplan til forebyggelse af vold på botilbud. Målet er mindre tvang, men vil udmøntningen blive en glidebane med uklare grænser mellem tvang og borgernes grundlæggende frihedsrettigheder?

Der er afgørende, at trygge rammer og sikkerhed er i orden både i psykiatri og på botilbud / forsorgshjem. Man skal ikke udsættes for vold eller trusler, når man bor eller arbejder på bosted / forsorgshjem eller i psykiatrien. Det arbejdes der systematisk med alle steder, men vi ved ikke meget om hinandens måder at gøre det på. Det er velkendt, at overgange og sektorskift indebærer risiko for videnstab og manglende overlevering af vigtig information; forskellige faglige paradigmer i tilgangen til psykiske syge borgere og gensidig uvidenhed mellem sektorerne spiller også en rolle. På symposiet vil forskellige vinkler på samarbejdet mellem psykiatri og botilbud / forsorgshjem blive foldet ud, og etiske dilemmaer vil blive belyst ved konkrete cases.

1. **Drab begået af alvorligt psykisk syge personer:**
  - a. Oplæg ved **Mette Brandt-Christensen, klinikchef, Psykiatrisk Center, Glostrup**, Retspsykiatrisk Interessegruppe
  - b. Kort gennemgang den forskningsbaserede viden om sammenhænge mellem psykose og drab
  - c. Kort gennemgang af de konkrete hændelser- både på bosteder og overfor nærtstående
  - d. Kort præsentation af de kommende specialiserede socialpsykiatriske afdelinger (besluttet af Folketingets satspuljepartier 14. oktober 2016)
2. **Bostedernes / forsorgshjemmenes vinkel:**
  - a. Oplæg ved **Erik Søndergaard, leder af forsorgshjemmet Saxenhøj og Fjordvang**
  - b. kort gennemgang af lovgrundlaget
  - c. det er beboerens hjem - socialpædagogisk versus psykiatrisk faglighed – hvordan finder vi hinanden?
  - d. en systematisk indsats for at forebygge vold
  - e. samarbejdet med psykiatrien – hvordan optimeres det?

### 2A: Psykiatrisk diagnostik – i går, i dag og i morgen ved Julie Nordgaard

Danske Regioner har lanceret obligatorisk efteruddannelse i psykopatologi for speciallæger i psykiatri. Baggrunden for dette er den lave reliabilitet af de kliniske diagnoser. Vi er ikke uenige i dette tiltag, men undrer os over vores arbejdsgiver kan påpege så væsentlige faglige problemstillinger hos os som faggruppe uden at det udløser nogen form for diskussion blandt os. I dette symposium vil vi forsøge at se nærmere på forskellige udfordringer omkring de psykiatriske diagnoser, herunder historiske, teoretiske og kliniske aspekter. Andre interesser som profit og karrierefremme spiller ligeledes en rolle i forhold til diagnostikken. I del symposium 2 lægger vi op til fælles diskussion – kan problemstillingen løses og hvordan?

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Chair-persons: Povl Munk-Jørgensen og Christina Blanner Kristiansen

**1. Psykopatologi og diagnostik – en vedvarende kilde til penge og karriere ved Povl Munk-Jørgensen, professor dr.med. og Christina Blanner Kristiansen, læge ph.d. studerende**

Psykiatrisk diagnostik er fortsat baseret på psykopatologi. Genetik, biokemi, neurofysiologi, neuroimaging bidrager endnu blot perifert.

Derfor er det af så stor vigtighed at psykiaterens stringens hvad angår iagttagelse af psykopatologiske fænomener ikke svækkes, at vi opretholder en meget høj reliabilitet. Og samtidig vogter nidkært over at symptom- og syndromdefinitioner ikke udvandes.

At psykiatriske diagnoser alligevel ændrer sig, bliver flere, kan måske tolkes som udtryk for en begrænset validitet? Omvendt kan man hævde at foranderlighed er et udtryk for en fortsat stræben efter det højeste mulige objektive diagnostiske system; en vedvarende søgen hen mod forbedringer.

I dette indledende oplæg omtales variationer i den psykiatriske diagnostiks historie med udgangspunkt i 100 års litteraturhistoriske og psykiatriske forsøg på posthumt at afklare og forstå de psykiske problemer, der prægede store dele af den svenske digter Gustav Frødings liv.

**2. De psykiatriske klassifikationer i et historisk perspektiv ved Annick Urfer-Parnas, overlæge Psykiatrisk Center, Hvidovre/Glostrup**

Måden hvorpå sindslidelser klassificeres afspejler de konceptuelle overvejelser, der påvirker psykiatrien i en givet tid. Siden slutningen af det 18. århundrede har psykiatrien kæmpet med at definere og afgrænse sindslidelserne. Gennem historien kan ses perioder, hvor 'pendulet' er svunget for langt til den ene side (for eksempel den depersonaliserede hjerne), andre gange for langt til den anden side (for eksempel en sjæl uden hjerne). I denne præsentation vil der blive gennemgået de psykiatriske klassifikationer i et historisk perspektiv og de faglige debatter, der var gældende i de givne tidsperioder. Begreber som "Dementia", "Mania" og "Madness" (psykose) vil blive undersøgt nærmere.

**3. Differentialdiagnostik ved Lennart Jansson overlæge, Psykiatrisk Center, Hvidovre/Glostrup**

Differentialdiagnostik er en metode, der går ud på at skelne mellem flere diagnostiske muligheder, og som derfor indgår i al diagnostik. I strukturerede diagnostiske systemer er den reduceret til en logisk algoritme eller "beslutningstræ", og her indgår symptomerne som uspecifikke faktorer, der kan kombineres og optælles. Men symptomerne kan ikke isoleres fra den psykopatologiske kontekst, de indgår i og som giver dem deres specifikke præg. Differentialdiagnostik handler derfor snarere om at identificere den underliggende psykopatologiske struktur og de hertil knyttede karakteristiske psykopatologiske fænomener. I skizofrenispektret drejer det sig fx om autismen, og i det affektive spektrum den særlige grundstemning. Dette danner baggrund for en prototypisk diagnostik, hvorefter ICD-10-diagnosen kan stilles ud fra de diagnostiske kriterier, der da blot tjener til afgrænsning af de diagnostiske kategorier. Der gennemgås konkrete differentialdiagnostiske sammenligninger.

## 3A: Mortalitet og antipsykotika – hvad ved vi? ved Jimmi Nielsen

Antipsykotika er en heterogen gruppe af lægemidler som anvendes til et stigende antal indikationer. Behandlingen med antipsykotika kan være forbundet med en række alvorlige bivirkninger, fx pludselig død, vægtøgning, diabetesudvikling og dyslipidæmi. Risikoen for disse livforkortende bivirkninger skal afvejes med risikoen for ubehandlede psykoser hvor der er øget risiko for selvmord og unaturlige dødsfald. De seneste år er der publiceret store undersøgelser

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der viser at brugen af antipsykotika er associeret med øget gennemsnitlig levetid. Formålet med dette symposie er at belyse sammenhængen mellem antipsykotika og mortalitet, herunder også at diskutere studierne styrker og svagheder.

1. **Mortalitet og antipsykotika – hvad ved vi?** ved Jimmi Nielsen, overlæge, professor, Psykiatrisk Center, Glostrup
2. **Bivirkningsindberetninger om mortalitet- hvad bidrager de med?** ved Christina Bruhn
3. **Bias i de store forkromede mortalitetsstudier** ved Morten Andersen

## 1B: Fortsat: Vold og drab på bosteder ved Mette Brandt-Christensen

1. Efter Blåkærgård  
Oplæg ved **Kirsten Nitschke, overlæge, Retspsykiatrisk Ambulatorium, Aarhus Universitetshospital, Risskov**
  - a. Kort gennemgang af rapporten "Kritisk hændelse i psykiatrien i Region Midtjylland 2012"
  - b. Kort gennemgang af Region Midtjyllands "En målrettet indsats i forhold til de mest komplekse retslige patienter" ("stjernepatienter")
  - c. Den administrative samarbejdsaftale i praksis.
2. Ethiske dilemmaer, pligten til omsorg, boligens ukrænkelighed, gråzoner mellem tvang og frivillighed
  - a. Oplæg ved: **Henriette Bruun, speciallæge, ph.d. studerende** og **Karl Erik Sandsten, læge, ph.d. studerende** Kompetencecenter for debuterende psykose, Region Sjælland, begge DPS etikudvalg
  - b. Belyst ved konkrete cases fra bosteder
3. Diskussion

## 2B: Fortsat: Psykiatrisk diagnostik – i går, i dag og i morgen ved Julie Nordgaard

1. **Har ICD-10 medført en mere ensartet diagnostik?** Ved Julie Nordgaard overlæge og forskningslektor, Kompetencecenter for debuterende psykose, Region Sjælland

En væsentlig motivation for at indføre de kriterium baserede operationelle diagnosesystemer (DSM-III+ og ICD-10) og dermed forlade de prototype baserede klassificeringer (DSM-II og ICD-8) var kravet om øget reliabilitet af de psykiatriske diagnoser. Håbet var, at det ville medføre fremskridt i ætiologiforskningen. Med publikationen af DSM-5 stod det klart, at dette håb ikke er blevet indfriet. I USA støtter National Institute of Mental Health nu ikke længere diagnose baseret forskning men derimod RDoC baseret forskning.

Vi ønskede at undersøge om de kliniske diagnoser er blevet mere ensartede efter indførelsen af ICD-10 og sammenlignende derfor udskrivningsdiagnoser fra fem københavnske hospitaler i henholdsvis ICD-8 æren og ICD-10 æren. Vi konkluderer, at der ikke er noget, der tyder på, at diagnostikken er blevet mere ensartet.

2. **Kliniske cases og oplæg til diskussion** ved Erica B. Høegh 1. reservelæge, Psykiatrien Vest, Region Sjælland og Karl Erik Sandsten læge og Ph. D. studerende, Kompetencecenter for debuterende psykose, Region Sjælland

Vi vil gennemgå to kliniske cases, hvori patienterne under deres forløb i psykiatrien har fået ændret diagnosen. Fælles for patienterne er, at deres symptombillede ikke har ændret sig betydeligt men alligevel har fået stillet flere forskellige diagnoser. Med udgangspunkt i hver enkelt

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patients historie gives oplæg til diskussion af følgerne af diagnosernes tildeling og ændring. Herunder patienternes og pårørendes selvforståelse og symptomforståelse, sundhedsvæsenets forståelse af patienterne og patienternes oplevelser af deres forløb i sundhedsvæsenet, samt de behandlingsmæssige og prognostiske konsekvenser.

### 3B: Talentrekruttering og studenterforskning ved Christina Blanner Kristiansen

Rekruttering til psykiatri og til forskning i psykiatrien er en udfordring. Psykiatrisk Forskerakademi repræsenterer en ny og anderledes tilgang til medicinstuderende som ressource i forskningen, akademisk dannelse og rekruttering til psykiatrien. Med dette symposium vil vi præsentere nogle konkrete aktiviteter og projekter, der bygger bro mellem medicinstudie og klinik, samt diskutere hvordan Akademiet udvider rammerne for gængs studenterforskning og talentrekruttering.

Psykiatrisk Forskerakademi ([psychiatricresearchacademy.org](http://psychiatricresearchacademy.org)) er en selvstyret forskergruppe med base i Odense og Aarhus. Akademiet består primært af medicinstuderende som er interesseret i forskning og psykiatri. Medlemmerne engagerer sig i mindre og overvejende klinisk orienterede projekter, og mødes med jævne mellemrum omkring såvel forsknings-specifikke diskussioner som alment dannende emner. Siden Akademiets fødsel i 2012 er populariteten og aktiviteten steget støt: Dags dato 8 medlemmer i Aarhus og 8 i Odense, 13 internationalt publicerede original artikler samt 15 letters, oversigtsartikler og kommentarer både nationalt og internationalt publiceret.

Symposiet henvender sig til alle med interesse for forskning og samarbejde med medicinstuderende.

**Chair: Jesper Nørgaard Kjær**

#### 1. Muligheder for at engagere medicinstuderende i psykiatrisk forskning ved Clara Reece Medici, stud.med.

Hvordan finder og engagerer man medicinstuderende i psykiatrisk forskning? Og hvilke formelle og uformelle muligheder har man, når man står med en forskningsidé, vejledererfaring, data og måske endda penge og statistiker?

Clara Reece Medici, medleder af Psykiatrisk Forskerakademi i Aarhus, vil fortælle om forskellige måder at inddrage medicinstuderende som ressource i forskningen og samtidigt bygge bro mellem medicinstudiet og klinikken. Claras erfaringer spænder fra små kliniske fritidsprojekter, over store registerstudier i et forskningsår til fuldtidsansættelse i et forskningsvikariat på et 3-årigt interventionsstudie. Hendes oplæg tager udgangspunkt i 'tried-and-true' og vil omfatte Psykiatrisk Forskerakademi, fritidsforskning, specialeopgaven, forskningsvikariater og forskningsår.

#### 2. Jagten på forskning som medicinstuderende ved Anja Friis Elliot, stud.med.

Som medicinstuderende kan man let blive fanget i eksamensræs og den konstante dårlige samvittighed over at man aldrig får læst nok. Hvordan får man brudt mentale barrierer omkring at komme i gang med forskning under studiet? Psykiatrisk Forskerakademi hjalp stud.med. Anja Elliott i gang med forskningsprojektet omkring QTc forlængelse og antipsykotika. Hun blev koblet til et projekt, hvor hun måtte samle mange løse ender og derved opnåede hun en viden omkring dataindsamling, analyser og artikelskrivning. Processen har ledt til en del frustration, afkald på perfektionisme og overskredet deadlines, men også nye samarbejdspartnere, international kongresdeltagelse og en ny funden passion i at formidle forskning til andre



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mennesker.

**3. Diskussion: Talentrekruttering og studenterforskning i dansk psykiatri ved Niels Okkels, læge**  
Hvorfor er studenterforskning vigtig? Og hvad kan de psykiatriske afdelinger gøre for at sikre talentrekruttering? I denne sidste etape af symposiet vil vi forsøge at besvare nogle centrale spørgsmål omkring talentrekruttering og studenterforskning. Vi vil samle op på de foregående oplæg og gøre status på dansk psykiatrisk studenterforskning anno 2016. Hvilke udfordringer står vi med? Hvad karakteriserer et sundt forskningsmiljø? Hvilke barrierer findes for god talentrekruttering? Dansk psykiatri har gennemlevet en rekrutteringskrise som måske - måske ikke - ser ud til at vende. På forskningsfronten har fremdriftsreformen besværliggjort det ellers populære forskningsår. Heldigvis er flere alternative forskningsformer begyndt at vinde frem. Et eksempel herpå er Psykiatrisk Forskerakademi som primært engagerer medicinstuderende i frivillig ulønnet forskningsaktivitet i sideløb med medicinstudiet. Den alternative tilgang til studenterforskning giver tilsyneladende mening blandt de unge, og Akademiet har siden grundlæggelsen i 2012 oplevet en stor medlemstilgang og har i 2015 opstartet endnu en filial. Vi vil indbyde publikum til at deltage i diskussionen.

Fredag d. 3. februar 2017

## 4A: Psykopatologi hos voksne med Aspergers syndrom og skizotypisk sindslidelse: Forskelle og ligheder ved Maria Nilsson

Formålet med dette symposium er at belyse forskelle og ligheder i psykopatologi ved skizotypisk sindslidelse og Aspergers syndrom hos voksne, dels ved en historisk gennemgang af autisme og skizofreni begreberne, dels ved en klinisk gennemgang af symptomerne ved de to lidelser.

Vanskeligheder med det sociale samspil, en anderledes adfærd og en følelse af at ikke være som alle andre kan være fremtrædende symptomer ved begge lidelser, hvilket kan medføre differentialdiagnostiske vanskeligheder. De to lidelser behandles dog på meget forskellige måder, og diagnosen er derfor første skridt til den rette hjælp og behandling.

Autismespektrumforstyrrelse (ASF) diagnosticeres typisk i barnealderen, indenfor børne- og ungdomspsykiatrien. Lidelser indenfor det skizofrene spektrum (inkl. skizotypisk sindslidelse) debuterer derimod ofte senere, og diagnosticeres derfor ofte i voksenpsykiatrien (selvom der også her typisk kan påvises symptomer fra barne-/ungdomsalder). Den tidsmæssige forskel i diagnosedebut mellem ASF og skizofrenispektrum lidelse betyder, at den diagnostiske ekspertise er placeret indenfor henholdsvis børne- og ungdomspsykiatrien og voksenpsykiatrien. Dette begrænser de differentialdiagnostiske overvejelser i begge specialer, og studier viser tilsvarende at mennesker med symptomer svarende til Aspergers syndrom enten overses, eller diagnosticeres indenfor det skizofrene spektrum i voksenpsykiatrien.

Relationen mellem skizofreni og autisme, er en historisk diskussion. Skizofrenidiagnosen blev beskrevet først, og deraf udsprang senere autismediagnosen. Diskussionen er fortsat højst aktuell, da det i 2015 blev erklæret et prioriteret emne i Schizophrenia Bulletin. Emnet har også for nylig været på den nationale agenda, i forbindelse med henvisning til udredning i Region Hovedstadens Psykiatri (RHP).

### 1. ved Maria Nilsson, læge, ph.d.-studerende, Psykiatrisk Center, Ballerup.

Formålet med den første del af symposiet er at gennemgå udviklingen af begreberne autismespektrum forstyrrelse respektive skizofrenispektrum lidelse, at drøfte ligheder og forskelle mel-

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lem skizotypisk sindslidelse og Aspergers syndrom, og hvordan man, ved at undersøge for subjektive symptomer, kan identificere forskelle med betydning for den differentialdiagnostiske vurdering.

De to begrebers historiske udvikling gennemgås med udgangspunkt i litteraturen. Ligheder og forskelle mellem Aspergers syndrom og skizotypisk sindslidelse drøftes teoretisk, med udgangspunkt i de diagnostiske kriterier for de begge lidelser. Brugen af undersøgelse for selvforstyrrelser drøftes som mulig forbedring af den differentialdiagnostiske vurdering.

Oplægget tager udgangspunkt i oplægsholderens igangværende ph.d.-projekt om psykopatologiske forskelle hos unge voksne med Aspergers syndrom og skizotypisk sindslidelse.

## 5A: Infektioner og inflammations rolle ved skizofreni: Fra registerstudier til inddragelsen af lumbalpunktur i differentialdiagnostisk øjemed ved Ole Köhler-Forsberg

I dette symposium vil vi præsentere betydningen af inflammation og infektioner i patofysiologien af skizofreni samt hvorvidt dette kan bidrage til en bedre differentialdiagnostik af patienter med akut psykose eller skizofreni ved hjælp af en lumbalpunktur.

### 1: Betydningen af infektioner og inflammation for udviklingen af skizofreni: epidemiologisk evidens ved Ole Köhler-Forsberg, læge, ph.d. studerende

Dette foredrag vil give et overblik over epidemiologiske studier der har undersøgt sammenhængen mellem infektioner og inflammation på risikoen for at udvikle skizofreni. En række af disse studier er gennemført af foredragsholderne. Forhøjede inflammations-parametre, såsom C-reaktivt protein (CRP) og interleukin-6 (IL-6), er blevet associeret med en øget risiko for skizofreni. Desuden har en række studier, heriblandt på de danske registre, fundet konsistente sammenhænge mellem infektioner og en øget risiko for at udvikle skizofreni. Dette gælder både alvorlige infektioner der kræver hospitalsindlæggelser, men også lettere infektioner behandlet i almen praksis. Disse risiko-estimer stiger afhængigt af antallet af infektioner, dvs. i en dosis-respons sammenhæng, samt at risikoen er endnu højere hos individer der desuden har en autoimmun sygdom. Alle disse fund understreger betydningen af immun-systemet i en svær psykiatrisk sygdom som skizofreni, hvilket understøttes af de seneste store genetiske studier.

### 2: Markører på inflammation og infektioner i cerebrospinalvæsken hos patienter med psykose og skizofreni ved Sonja Orlovskå, læge, ph.d. studerende

Epidemiologiske fund kan være behæftet med en række fejlkilder, hvorfor det er vigtigt at undersøge tilstedeværelsen af infektioner og markører på inflammation hos patienter med skizofreni. Kliniske studier har fundet forhøjede inflammations-markører i perifert blod sammenlignet med raske mennesker. Dog afspejler niveauet i blodet ikke nødvendigvis niveauet i hjernen, da denne er beskyttet af blod-hjerne barrieren. Derfor er det afgørende at undersøge koncentrationerne i cerebrospinalvæsken, der direkte omslutter hjernen.

Dette foredrag vil præsentere fund fra en systematisk litteratursøgning og meta-analyse på studier der har undersøgt cerebrospinalvæsken hos patienter med psykose eller skizofreni. Studiet er gennemført af foredragsholderne og finder, at der er udført over 20 studier på verdensplan. Fundene antyder, at op til 40 % af patienter med psykose eller skizofreni har tegn på øget permeabilitet af blod-hjerne barrieren. Desuden blev op til 6 % af patienterne i de kliniske studier re-diagnosticeret baseret på fund fra lumbalpunkturen, f.eks. til multiple sklerose eller encephalitis. Studierne var dog behæftet med en række svagheder, hvoraf den største svaghed er, at de er baseret på en selekteret kohorte. Det er således uvist, hvor stor en andel af patienter med en første-gangs diagnose med psykose eller skizofreni, som har inflammation og/eller

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tegn på tidligere infektion i hjernen samt om en lumbalpunktur kan hjælpe med en bedre differentialdiagnostisk udredning i de tidlige stadier af sygdommen.

### **3: PSYCH-FLAME: Kan en lumbalpunktur bruges i differentialdiagnostikken hos patienter med første-gangs psykose? ved Michael Eriksen Benros, læge, ph.d. studerende, seniorforsker**

Baseret på ovenstående viden har vi initieret et klinisk studie der systematisk skal indsamle cerebrospinalvæske fra patienter med en førstegangs diagnose med akut psykose eller skizofreni. Studiet er døbt PSYCH-FLAME og inkluderer både indlagte samt ambulante patienter i Region H. Lumbalpunkturen bliver et led i den kliniske differentialdiagnostik. Udover basale undersøgelser, vil vi undersøge for tilstedeværelsen af en lang række markører for inflammation og tidligere infektioner. Designet er et tværsnits-studie, og udover lumbalpunkturen vil vi tage korreponderende blodprøver samt undersøge patienternes psykopatologi, funktionsniveau og kognition. Dette foredrag vil give et overblik over det kliniske studiedesign og give en status på rekrutteringen.

## **4B: Fortsat: Psykopatologi hos voksne med Aspergers syndrom og skizotypisk sindslidelse: Forskelle og ligheder ved Maria Nilsson**

**Del 2 ved Maria Nilsson, læge, ph.d. studerende, Psykiatrisk Center, Ballerup og Peter Handest, overlæge, ph.d., Psykiatrisk Center, Nordsjælland.**

Ved at undersøge og beskrive patientens egen oplevelse kan man eventuelt identificere forskelle med betydning for adskillelsen mellem skizotypisk sindslidelse og Aspergers syndrom.

Formålet er at anskueliggøre ligheder og forskelle mellem skizotypisk sindslidelse og Aspergers syndrom, ved at tage udgangspunkt i patienternes egne oplevelser.

Live-interview ved Peter Handest og Maria Nilsson af to patienter diagnosticeret med henholdsvis skizotypisk sindslidelse, og Aspergers syndrom. Interviewet vil illustrere ligheder og forskelle ved de to lidelser, samt belyse forskelle i oplevelsen af specifikke symptomer. Symptomer der ved overfladisk "objektiv" vurdering kan virke ensartede, men som indebærer fundamentalt forskellige subjektive oplevelseselementer for patienterne.

Symposiet er tilrettelagt med henblik på diskussion og spørgsmål fra tilhørerne.

## **5B: Psykiatriens rødder – i videnskab, filosofi, historie og samfund ved Per Vestergaard**

Dagspressen bringer løbende beretninger om psykiatriens talløse problemer: fra lange ventelister og tidlig udskrivning til overmedicinering og vold. Politikerne drøfter det eksponentielt stigende antal psykiatriske patienter og de heraf følgende udgifter for både sundheds- og social væsen. Det ligger lige for at spørge, om psykiatriens mange problemer og dilemmaer er uundgåelige eller om der er grundlagsproblemer, fejl og uorden i psykiatriens rødder. To danske bøger, udgivet i 2016, angriber denne problemstilling. Raben Rosenerg har skrevet om "Psykiatriens grundlag – historie, filosofi og videnskab" og Per Vestergaard om "Den ustyrlige psykiatri – mellem adfærdsforstyrrelse og sygdomsproblem: en idehistorisk analyse". Ved symposiet vil forfatterne fremlægge bøgernes grundteser og to kritikere vil påpege bøgernes styrker og svagheder. Begge kritikere – Knud Kristensen (formand for Sind) og Ida Hagemann – har anmeldt bøgerne i dags – og fagpressen. De indledende oplæg fra forfattere og kritikere danner baggrund for en debatrunde. Debatten vil give medlemmerne lejlighed til at fremføre egne synspunkter på psykiatriens grundlæggende dilemmaer og ligeledes deres kritik af bøgerne. Målet er at blive klogere på det idegrundlag, den moderne psykiatri hviler på med fokus

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på både historiske, filosofiske og videnskabelige forhold sat ind i en samfundsvidenskabelig sammenhæng anno 2017.

**1. Psykiatriens rødder – historie, filosofi og videnskab ved Raben Rosenberg, klinikchef, professor dr.med. Psykiatrisk Center, Amager**

I 2016 udgav jeg en bog med denne titel for at belyse en række grundlagsproblemer på baggrund af psykiatriens udvikling fra fagets fødsel i starten af 1800-tallet og frem til i dag med fokus på en filosofisk analyse af sygdomsbegreb, psykopatologi, diagnostik, årsagsforståelse og videnskabelige bud på at afklare generative mekanismer ved psykiske sygdomme, dvs. sygdomsmekanismer, samt begrunde behandling. Et centralt tema er det klassiske sjæl-legeme problem, og fagets udvikling har i høj grad aktualiseret en række etiske problemer. I lyset af sådanne problemstillinger er det ikke overraskende, at psykiatri altid har været et mere omdiskuteret område i sundhedsvidenskab end andre discipliner, men det er netop det, der gør psykiatri så tiltrækkende et fag at beskæftige sig med. For bag alle disse problemer finder vi de patienter for hvem psykiatriens sygdomsforståelse, behandling og etiske synspunkter er så afgørende. De har frem for alt et krav på, at vi beskæftiger os med vort fags grundlag.

**2. Kritik af Raben Rosenbergs bog ved Ida Hagemann, klinikchef, Psykiatrisk Center København**

**3. Psykiatriens rødder om "Den ustyrlige psykiatri" ved Per Vestergaard, professor emeritus, dr.med.**

Har den moderne psykiatri et grundlagsproblem? Det vidner den ustyrlige tilgang af psykiatriske patienter om. Det vidner den vedvarende presseomtale af psykiatriens problemer og skandaler ligeledes om. En historisk analyse bekræfter formodningen om, at psykiatrien rummer et grundlæggende problem. Som udgangspunkt var der harmoni mellem patientproblemer og behandlingsmetoder, da psykiatrien blev grundlagt for ca. 200 år siden. Denne harmoni blev i løbet af 1900-tallet truet, i takt med at egentlige hjernesygdomme som epilepsi og dementia paralytica blev neurologiens domæne og i takt med at stadig flere adfærdsforstyrrelser og trivselsproblemer blev psykiatriens domæne. I dag hersker en betydelig disharmoni mellem de talløse adfærdsforstyrrelser og sociale problemstillinger, der henføres til psykiatriens område og de lægevidenskabelige behandlingsmetoder der er psykiatriens kernekompetencer. Bogen, "Den ustyrlige psykiatri", fortæller historien om problemerne, deres årsager og udvikling og drøfter løsninger.

**4. Kritik af Per Vestergaards bog ved Knud Kristensen, formand for SIND**

## 6A: Pontoppidan I - foredragskonkurrence

## 6B: Pontoppidan II – foredragskonkurrence

### Adult with Autism – Oxidative stress, comorbidity and predisposition

Morten Bækgaard Thorsen<sup>1,2,3,4</sup>; Niels Bilenberg, MD<sup>5</sup>; Niels Heegaard, MD<sup>6,7</sup>; Åsa Fex Svenningsen<sup>8</sup>; Tanja Maria Michel, MD<sup>1,2,3</sup>

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**Introduction:** While genetic and environmental factors are considered causal in development of autism spectrum disorder (ASD), the pathophysiology of the disorder is still not known, and the diagnosis is still based on observational and anamnestic data. Oxidative stress in children with ASD has been shown in several studies, but few have investigated whether the exposure persists into adulthood.

**Aims:** To study the level of oxidative stress in ASD along with prevalence of comorbidity, psychiatric predisposition and physical health.

**Methods:** 56 patients above age 18, diagnosed in childhood with ASD, were included, along with gender and age matched controls. Participants were interviewed regarding their health, familial predisposition and social status, and had their plasma analyzed for pro-oxidant xanthineoxidase (XO) and antioxidants superoxide dismutase 1 (SOD1) and 2 (SOD2).

**Results:** Patients with ASD showed higher levels of SOD1 (268.2 ng/ml vs. 205.6 ng/ml). Through linear regression it furthermore showed correlation with autism severity, measured by the autism quotient questionnaire (Coef. 0.0233,  $p=0.002$ ). We found no differences between case and control group regarding SOD2 and XO. There were differences at baseline between groups. Weight showed a possible influence on biomarker differences. ASD group had a higher BMI, fewer drank alcohol and more had a psychiatric diagnosis apart from ASD.

**Conclusion:** Oxidative stress seems to play a role in ASD, even into adulthood. Higher level of the antioxidant SOD1 could point to an upregulation caused by exposure to free radicals. Furthermore, patients with ASD often have psychiatric comorbidities, have families with psychiatric diagnoses, and are less healthy physically.

## Light as an Aid for Recovery in Psychiatric Inpatients: A Randomized Controlled Effectiveness Pilot Trial

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**Background:** Artificial indoor lighting can disturb sleep and increase depressive symptoms; both common complaints in psychiatric inpatients.

**Aims:** To improve quality of sleep in patients using an indoor hospital lighting environment simulating nature in intensity, color, and circadian timing.

**Methods:** Investigator-blinded parallel-group randomized controlled effectiveness trial supplied with qualitative interviews in an inpatient psychiatric ward with fully automatic and adjustable lighting. Admitted patients received a room with a naturalistic lighting environment (intervention group) or lighting as usual (control group). The primary outcome was the Pittsburg

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Sleep Quality Index and secondary outcomes included the Major Depression Inventory and WHO-five Well-Being Index.

**Results:** In this ongoing trial we included 28 patients (16 treated and 12 controls). Patients in the intervention group reported higher subjective sleep quality and sleep efficiency, lower use of sleep medication (mean difference, 4.68 mg; 95% CI, 0.54 to 53.5), fewer depressive symptoms (mean difference, 5; 95% CI, -2 to 13), but lower well-being (difference, -4 percentage points; 95% CI, -20 to 16), compared with the control group. At discharge, fewer patients in the intervention group had experienced use of involuntary treatment. Qualitative data indicated no side-effects apart from issues in performing indoor leisure activities in dim light.

**Conclusions:** A naturalistic lighting environment was safe and improved sleep and mood in our small patient sample. The trial integrated well with routine clinical care and our sample reflected the heterogeneity of the target population (Funded by Region Midtjylland and others; Clinicaltrials.gov number, NCT02653040)

## Heritability of Neurometabolites, and their Correlation to Schizophrenia: a MRS Twin Study

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Aberrant glutamate levels have been found in unmedicated schizophrenia patients early in the disease, though differences were not pronounced in more chronic patients. Genes coding for glutamate receptor subunits have been related to schizophrenia, but to our knowledge heritability of glutamate levels has not been established. This is the largest twin study to investigate heritability and correlation to schizophrenia liability of glutamate.

21 monozygotic and 16 dizygotic proband (F2x.x) pairs, along with 22 monozygotic and 19 dizygotic healthy control pairs were included; 11 additional twins were included without their sibling. 3T [1H]-MR spectroscopy (MRS) was used to obtain spectra from anterior cingulate cortex (ACC) and left thalamus for assessment of glutamate (Glu), N-acetyl aspartate (NAA), choline (Ch), creatine (Cr) and myo-inositol (mI). Additive genetic (A), common environmental (C) and unique environmental (E) effects were estimated through structural equation modeling and the Akaike Information Criterion was used to determine the best fitting model.

NAA, Ch and Cr concentrations in the ACC were negatively correlated with schizophrenia liability. Significant heritability was found in the ACC for Glu (36%), NAA (9%), Ch (43%) and mI (38%). A significant contribution of C in thalamus was established for NAA (26%), Ch (52%), Cr (33%), and in the ACC for Cr (26%).

Establishing heritability of Glu, is a new discovery that further ties the glutamatergic circuitry to genetic variations. In our cohort, no correlation to disease liability was found for Glu, which is in accordance with Glu levels decreasing with illness duration. Taken together with previous findings of altered Glu levels in unmedicated patients early in the disease, our results suggest Glu, NAA and Ch, in the ACC as possible endophenotypes for the early stages of schizophrenia.

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## The relation between EPHX2 gene polymorphism, rate of weight change and lipid profile in Anorexia Nervosa

Alia Arif Hussain, MD, Jan Magnus Sjögren, Associate Professor, PhD, Consultant, Psychiatrist

**Background:** Anorexia Nervosa (AN) is a serious eating disorder with potentially life-threatening physiologic effects. Although AN is one of the less prevalent psychiatric diseases it has one of the highest mortalities. The pathophysiology of AN is unknown, and chronicity and mortality is high. Gene Wide Association Studies (GWAS) suggest an involvement of the EPHX2 gene in the pathophysiology of AN. EPHX2 gene influence the concentration of lipids, and dyslipidemia often occurs during weight restoration in AN. However, the impact of EPHX2 on rate of weight change during weight restoration in AN, and the relation to lipid profile, is unknown. This is an essential formative step to characterizing the neurobiology of this illness.

**Objective:** Based upon findings from GWAS studies in AN, we propose to investigate the influence of the EPHX2 gene polymorphism on the rate of weight change during controlled weight restoration, and on lipid profiles in AN.

**Method:** In underweight sporadic AN patients (n=63; non-twins; 76 will be enrolled assuming 20% drop-out rate), study the rate of weight change during 4 weeks (BMI and blood sampling weekly; in total 6 times, twice at baseline) and investigate the relation to EPHX2 gene inheritance when the patients undergo a controlled individualized weight restoration diet at an inpatient ED specialized unit. The impact of EPHX2 gene polymorphism on the lipid profile in blood will also be investigated.

**Hypothesis:** The overarching hypothesis is that EPHX2 genotype, influences AN risk through interaction with lipids, and that lipid composition and concentrations contribute to the pathogenesis and prognosis of AN. This is optimally detected during restoration when AN patients undergo a controlled weight gain diet. Specific lipids may serve as biomarkers to assess response to treatment and recovery.

## Differences in antipsychotic prescriptions between centres in young outpatients with schizophrenia

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**Objective:** National guidelines on choice of psychopharmacological treatment are available, but the final choice is based on several factors. We want to investigate differences in prescription patterns between different outpatient psychosis units treating identical populations within same administrative region.

**Methods:** Observational study of patients treated at 2 different young outpatient psychosis units in the Region of Central Jutland, Denmark. Inclusion criteria were treatment at the clinic, a

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diagnosis of psychotic disorder, and participation in a lifestyle intervention programme at the clinic. Patients were enrolled from January 2013 to March 2015 with follow-up until June 2015. Prescription histories were collected from case records and confirmed at clinical interviews. Antipsychotic prescriptions (number, type and dose) and prescription of other psychotropic medication (number and type) were compared between centres.

**Results:** Hundred and thirty of 136 screened patients (96%) from 2 different centres were available for follow-up and inclusion in the analysis. The proportion of antipsychotic polypharmacy at follow-up was significantly different between centres (49% vs. 5%), but median total doses of antipsychotics were comparable (0.92 vs. 0.80 defined daily doses).

Most used antipsychotic drug at both centres was aripiprazole (53% vs. 20%). Secondly most used antipsychotic differed between centres, and were risperidone (29% vs. 16%) respectively paliperidone (5% vs. 17%).

Proportion of pro necessitate prescription of antipsychotics differed greatly between centres (66% vs. 26%) with quetiapine as the most used drug (47% vs. 11%).

**Conclusions:** Prescribed drugs, but not total doses of, antipsychotics differed between outpatient units. Pro necessitate prescription of antipsychotics differed significantly in extend. Recommended drugs were prescribed in most cases, but type of drugs differed between centres.

## Typical and atypical antipsychotics in acute mania: Comparison of effectiveness

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**Introduction:** Mania is challenging to treat. Typical antipsychotics may be more efficient compared with atypical antipsychotics, however, with unfavorable side effects.

**Aims:** To investigate the course of an acute manic episode and correlation between change in severity of mania and the corresponding use of typical and atypical antipsychotics.

**Methods:** This retrospective case record study included patients admitted with mania (International Classification of Diseases 10th revision code F30, F31.0, F31.1, F31.2 or F31.6) at the Department of Affective Disorders, Aarhus University Hospital from 2013-2015.

The dose of typical and atypical antipsychotics was standardized as defined daily dose according to the World Health Organization's guidelines. The severity of mania was measured daily with the Modified Bech-Rafaelsen Mania Scale (MAS-M), a validated, nurse administered scale. We applied a linear regression in a mixed model approach to compare the Mas-M score over time under the influence of typical and atypical antipsychotics, respectively.

**Results:** We included 48 patients with a total of 12,087 observations. The course of the manic episode measured by MAS-M varied between patients – both daily variation and change over time. Patients receiving typical antipsychotics were constrained significantly more. They had more recent admissions, a higher baseline MAS-M and lower defined daily dose of antipsychotics, yet the difference was not statistically significant. The daily change in MAS-M score was



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-0.23 for typical antipsychotics and -0.24 for atypical antipsychotics with a non-significant difference of 0.01 (95% CI -0.02;0.03).

**Conclusions:** The course of an acute manic episodes varies greatly on a daily basis as well as between patients. The rate of improvement of mania may be independent of baseline severity or type of antipsychotic medication.

## Men with high serotonin 1B receptor binding have high trait anger and respond to provocations with heightened amygdala and striatal reactivity

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Serotonin signaling influences amygdala reactivity to threat-related emotional facial expressions in healthy adults, but in vivo serotonin signaling has never been investigated in the context of provocative stimuli in aggressive individuals. Here, we investigate 18 aggressive violent offenders and 22 healthy control subjects with the aim to evaluate the association between brain serotonin 1B receptor (5-HT1BR) levels, brain reactivity to provocations and the personality feature trait anger. We quantified regional 5-HT1BR binding using [11C]AZ10419369 positron emission tomography (PET) and measured brain activation with functional magnetic resonance imaging (fMRI) following provocations in terms of monetary subtractions from a fictive opponent. With this point-subtraction aggression paradigm (PSAP) adapted for fMRI, subjects have the possibility to either behave aggressively or to pursue monetary rewards. Trait anger was measured with the State-Trait Anger Expression Inventory. We used a single latent variable model framework to test for a common association between these three measures. We found that across participants, one latent variable significantly positively predicted 5-HT1BR binding (all regions  $p < 0.001$ ), trait anger ( $p=0.002$ ), amygdala ( $p=0.04$ ) and striatal ( $p=0.04$ ) reactivity to provocations. These findings provide novel evidence that 5-HT1BR brain levels are linked to both neural reactivity to provocations and trait anger in a cohort of men displaying a wide range of aggressive behaviors. The data suggest that 5-HT1BR represents an intriguing target for reducing excessive neural reactivity to provocations and thereby aggressive behaviors.

## Streptococcal throat infection as risk factor mental disorders: Testing the PANDAS hypothesis in a nationwide study

Sonja Orlovska, Claus Vestergaard, Bodil Hammer Bech, Merete Nordentoft, Mogens Vestergaard, Michael Eriksen Benros

**Background:** Previous studies have linked streptococcal throat infection with the development of OCD and tic disorders in children and pre-adolescents, which is the concept of the PANDAS

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hypothesis (Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal infection). However, results are conflicting and no large-scale studies investigating the PANDAS hypothesis have previously been conducted.

**Methods:** Utilizing the unique nationwide Danish registers, we identified individuals who had been tested for group A beta-hemolytic streptococcal throat infection by the general practitioner. In the study period of 1996-2013, a total of 637,953 individuals <18 years of age were registered with a streptococcal test. We followed these individuals in the Psychiatric Central Register for a diagnosis of any mental disorder, OCD and tic disorders.

**Results:** Individuals with a positive streptococcal test had an increased risk of any mental disorder (IRR=1.18, 95% CI=1.15-1.21), particularly of OCD (IRR=1.48, 95% CI=1.24-1.76) and tic disorders (IRR=1.36, 95% CI=1.20-1.53) compared to individuals without a test. Furthermore, the risk of any mental disorder and OCD was more elevated after a streptococcal throat infection when compared to individuals with a non-streptococcal throat infection (P=.001 and P=.02). Nonetheless, individuals with a non-streptococcal throat infection also had an increased risk of any mental disorder (IRR=1.09, 95% CI=1.06-1.12), OCD (IRR=1.21, 95% CI=0.99-1.46), and tic disorders (IRR=1.29, 95% CI=1.14-1.46).

**Conclusion:** We conducted the first large-scale study investigating the PANDAS hypothesis and found that individuals with a streptococcal throat infection only had a slightly more elevated risk of mental disorders compared to individuals with a non-streptococcal throat infection. These results could support the wider diagnostic concept of PANS (Pediatric Acute-onset Neuropsychiatric Syndrome) which is not only confined to streptococcal infections in contrast to PANDAS.

## Individuals with schizophrenia and their attendance in primary health care

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**Objective:** Schizophrenia is associated with high mortality, somatic comorbidity and reduced life expectancy. The general practitioner (GP) plays a key role in the treatment of mental and physical multimorbidity, but it is unclear how much individuals with schizophrenia use primary health care. This paper aims to investigate attendance patterns in general practice for individuals with schizophrenia.

**Method:** We performed a population-based matched cohort study of 21,757 individuals with schizophrenia and 435,140 age- and gender-matched references from Danish national registers. Monthly general practice visits were analysed using a generalized linear model with log link and assuming negative binomial distribution.

**Results:** Individuals with schizophrenia attended their GP more than the references throughout the study period; the cases had 82% (95%CI: 78-87) and 76% (95%CI: 71-80) more visits in primary care after 1 year and 5 years, respectively. The proportion of individuals who did not

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attend their GP was lower for individuals with schizophrenia, except for individuals with one or more comorbid illnesses.

**Conclusion:** Individuals with schizophrenia are regularly in contact with their GP. General practice could provide a platform for future research to test whether care coordination interventions can improve the treatment of comorbid somatic illnesses in individuals with schizophrenia.

Lørdag d. 4. februar 2017

## At fylde 18 år og få ændret sin diagnose -

Forstås begrebet psykose forskelligt i børne-, ungdoms- og voksenpsykiatrien? Er der faktorer på spil som voksenpsykiatere ikke kender til?

### 3. Abstracts til postersessionen

Første forfatter	Titel
1. Signe Skammeritz	The Cultural Formulation Interview – in a Danish Context
2. Hinuga Sandahl	Treatment of sleep disturbances in trauma-affected refugees – A randomized controlled trial
3. Eva Hundrup	Time trends and variations in electroconvulsive treatment in Denmark 2008-2014. A nationwide register based study
4. Maria Nilsson	Psykopatologiske forskelle mellem Aspergers syndrom og skizotypisk sindslidelse hos voksne
5. Mikkel Højlund	Går medicinforbruget op, når brugen af tvang går ned, eller kan det følges ad?
6. Christian Legind	Heritability of Neurometabolites, and their Correlation to Schizophrenia: a MRS Twin Study
7. Karen Tangmose	Dopamine synthesis capacity and reward processing in first-episode-psychosis
8. Niels Okkels	Treatment Profiles in a Danish Psychiatric University Hospital Department
9. Line Lindhardt	Psyko-seudvikling og identifikation af advarselssymptomer hos patienter henvist til TOP
10. Anja Elliot	QTc interval in individuals with schizophrenia receiving antipsychotic treatment as monotherapy or polypharmacy
11. Birgitte Nielsen	The Function of Mitochondria and Oxidative Stress after Antidepressant Treatment in Rats
12. Conny Träger	Influences of patient informed cognitive complaints on activities of daily living in patients with bipolar disorder. An exploratory cross-sectional study
13. Johannes Gehr	Validation study of the Danish version of the Brief Negative Symptoms Scale
14. Kate Andreasson 1	Efficacy of dialectical behavior therapy vs. collaborative assessment and management of suicidality treatment for reduction of self-harm in adults with borderline personality traits and disorder - a randomized observer-blinded clinical trial
15. Kate Andreasson 2	MYPLAN –mobile phone application to manage crisis of persons at risk of suicide: a multi-center, randomized clinical trial
16. Katja Cat Trang Vu	Neural correlates of personality in reward processing
17. Katrine Breitenstein	The role of oxidative stress in electroconvulsive therapy: Difference in young and old rats?
18. Kirsten Borup Bojesen	Glutamate and GABA in antipsychotic-naïve schizophrenia and association to treatment outcome and cognitive dysfunction
19. Krzysztof Gbøl	Predicting effects and risk of relapse into depression – The Danish ECT/MRI project

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20. Maj Vinberg Differences in clinical presentation between bipolar I and II disorders in the early stages of bipolar disorder: a naturalistic study
  21. Morten Bækgaard Thorsen Adult with Autism – Oxidative stress, comorbidity and predisposition
  22. Pelle L Ishøj 1 Effect of GLP-1 Receptor Agonist Treatment on Body weight in Obese Antipsychotic-treated Patients with Schizophrenia: a Randomized, Placebo-controlled Trial
  23. Pelle L Ishøj 2 No Cognitive-enhancing Effect of GLP-1 Receptor Agonism in Antipsychotic-treated, Obese Patients with Schizophrenia
  24. Tina Sørensen Substance use among Danish psychiatric patients - A cross sectional study
  25. Alia Hussain The relation between EPHX2 gene polymorphism, rate of weight change and lipid profile in Anorexia Nervosa
  26. Karl Erik Sandsten The Neurophysiological Underpinnings of Self-Disorder in Schizophrenia
  27. Jesper Nørgaard Kjær Using the dietary quality score in an outpatient clinic for adults with ADHD
  28. Iben Gammelgård Personal Recovery with the Individual Placement and Support intervention for people with severe mental illness
  29. August Wang Opfølgning efter behandling for selvmordstanker og selvmordsforsøg
  30. Titia Lahoz The treatment in the Danish Suicide Prevention Clinics: a qualitative description
  31. Christina Blanner Kristiansen Understanding the widowhood effect – a cross-countries mixed methods study

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# 1

## The Cultural formulation Interview – in a Danish Context

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**Formål:** Formålet er at styrke viden om udredning og diagnosticering af psykiske lidelser hos patienter med migrantbaggrund i Danmark, samt muliggøre en kulturelt tilpasset og patientcentreret tilgang til patienten. I studiet ønsker jeg at undersøge om det Transkulturelle Interview (TKI1) bidrager med vigtig information til klinikerne i den diagnostiske proces og behandlingsplan

**Metode:** Population: 70 patienter med migrant baggrund, som er henvist til følgende klinikker: CTP, Indvandremedicinsk Klinik på Hvidovre Hospital og Distriktpsikiatrisk Center Ballerup i perioden august december 2015 – Juni 2016. En rekruttering fra klinikker med forskellige behandlingstilbud vil sikre at resultaterne bliver repræsentative i en større kontekst i det danske sundhedsvæsen. For at blive inkluderet skal patienten være en 18 år eller ældre migrant og have en psykiatrisk lidelse.

**Dataindsamling:** Såfremt det ved første samtale i klinikken viser sig at patienten opfylder inklusionskriterierne planlægger lægen gennemførelse af TKI ved den næste lægesamtale. Lægen vil resumere TKI'en i journalen og vil i et spørgeskema notere om informationen fra TKI'en har ændret lægens opfattelse af patientens symptomer, diagnose eller indholdet af behandlingsplanen. Patienten vil efter interviewet blive bedt om at udfylde et spørgeskema om tilfredsheden med interviewet. Data bliver analyseret for at give et kvantitativt estimat over den ekstra information der indsamles ved at bruge TKI.

Forud for projektets start vil de læger der skal gennemføre TKI modtage grundig undervisning i udførelsen.

**Resultater:** Data er ved at blive analyseret nu, og vil blive præsenteret på årsmødet.

**Konklusion:** Udfærdiges når resultaterne er klar.

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<sup>1</sup> TKI er oversat til dansk fra den engelske *Cultural Formulation Interview (CFI)* af forlaget Hogrefe.

## TREATMENT OF SLEEP DISTURBANCES IN TRAUMA-AFFECTED REFUGEES – A RANDOMISED CONTROLLED TRIAL

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<sup>2</sup>Danish Center for Sleep Medicine, Rigshospitalet-Glostrup

**BACKGROUND AND AIM:** Sleep disturbances are often referred to as a hallmark of PTSD (1,2). In a sample of 752 trauma-affected refugees undergoing treatment at Competence Centre for Transcultural Psychiatry (CTP) 99% reported sleep disturbances and nightmares (3).

In trauma-affected populations untreated sleep disturbances can uphold and exacerbate PTSD symptoms, affect the efficacy of first-line PTSD treatment and constitute a risk factor for poor outcome of psychiatric treatment (1,2). There is a lack of randomised clinical trials on treatment of sleep disturbances in trauma-affected refugees.

The aim of this study is to examine sleep enhancing treatment in refugees with PTSD.

The objectives are:

1. To estimate the efficacy of IRT and mianserin on sleep quality, sleep length and nightmares compared to treatment as usual (TAU)
2. To study the relation between enhanced sleep, PTSD-symptoms, observer rated functioning and self-rated quality of life
3. To examine predictors for positive outcome of treatment

**MATERIALS AND METHOD:** The study will include 230 participant, who will be randomised to four groups:

1. TAU; pharmacological treatment according to algorithm and manual based Cognitive Behavioural Therapy
2. TAU and add-on treatment with mianserin
3. TAU and add-on treatment with IRT
4. TAU and add-on treatment with mianserin and IRT

Trial endpoints are sleep, nightmare, PTSD and depression symptoms, quality of life and level of functioning.

**RESULTS:** The study began inclusion in marts 2016, inclusion is ongoing.

**DISCUSSION:** The study is expected to bring forward new knowledge on treatment of sleep disturbances in trauma-affected refugees.

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2. Maher MJ, Rego SA, Asnis GM. Sleep disturbances in patients with post-traumatic stress disorder: epidemiology, impact and approaches to management. *CNS Drugs* [Internet]. 2006 Jan [cited 2014 Nov 12];20(7):567–90. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/16800716>
3. Sandahl H, Vindbjerg E, Carlsson J. Treatment of Sleep Disturbances in Refugees Suffering from Posttraumatic Stress Disorder. Accepted for publication *Transcult Psychiatry*. 2016;

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# 3

## Time trends and variations in electroconvulsive treatment in Denmark 2008-2014. A nationwide register based study

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**Objective:** to determine status and variations in the practice of electroconvulsive treatment (ECT) in Denmark in patient characteristics, indications, treatment patterns and hospital Region.

**Method:** All 140 627 ECTs registered in the Danish National Patient Registry between 2008 and 2014 were retrieved together with information on patient characteristics. Annual treated person rates were calculated for gender, age, admission diagnosis and Region.

**Results:** The overall ECT treatment rate was 36, 95% CI 44-49 per 100000 resident population during the study period. The rate was highest in women and increased with age. There were modest, however, stable regional differences in rates (extremal quotient=1.4). ECT was most commonly used in patients with depression with (19.4%) or without (54.9%) psychotic symptoms. The median number of ECTs administered per patient was 10 and highest in patients with schizophrenia, schizo-affective or bipolar disorders. 51%, 14% and 33% of ECTs were administered with bilateral, unilateral and unspecified electrode placement, respectively. There were regional differences in electrode placement specification and use.

**Conclusion:** Although some variation was seen across hospital Regions and electrode placement, ECT in Denmark was provided with relative stability over time and indications compared to most other countries in Europe and North America.



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# 4

## Psykopatologiske forskelle mellem Aspergers syndrom og skizotypisk sindslidelse hos voksne

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Medforfattere: Overlæge, ph.d. Jessica Carlsson Lohmann, overlæge, ph.d. Peter Handest, overlæge, dr.med. Sidse Arnfred

Psykiatrisk Center Ballerup

**Formål:** Projektet undersøger forskelle i psykopatologi, herunder tilstedeværelse af selvforstyrrelser, hos unge voksne (18-30 år) diagnosticeret med hhv. Aspergers syndrom og skizotypisk sindslidelse. Formålet er at identificere hvilke symptomer der kan adskille de to diagnoser i klinikken, samt at bidrage til både generel og diagnosespecifik beskrivelse af autismebegrebet. Hypotesen er at der vil være flere (og andre) selvforstyrrelser tilstede ved skizotypisk sindslidelse, i forhold til ved Aspergers syndrom.

**Metode:** Tilstedeværende symptomer kortlægges hos 50 deltagere med Aspergers syndrom, og 50 med skizotypisk sindslidelse. De inkluderede deltageres diagnoser evalueres ved et ekspertpanel, deltagerne interviewes med tre semi-strukturerede interviews (SCAN, ADOS og EASE) der kortlægger generel og diagnosespecifik psykopatologi, inklusive tilstedeværelse af selvforstyrrelser. Deltagerne udfylder selv-evalueringsskemaer vedrørende diagnose-specifikke symptomer, funktionsniveau, symptombyrde og livskvalitet.

**Resultater:** Der undersøges for forskelle mellem SCAN og ADOS algoritmer, og totale EASE scores, på gruppeniveau (i henhold til ekspertpanelevaluering), samt for korrelationer på tværs af psykopatologiske domæner. Der foretages også eksplorativ (trans-diagnostisk) faktoranalyse på EASE- item-niveau.

**Konklusion:** En statistisk signifikant forskel i samlet EASE-score, hvor gruppen med skizotypisk sindslidelse har en højere samlet EASE-score (LMD 10), vil i henhold til projektets hypotese være et positivt resultat. Såfremt hypotesen er rigtig, vil klinisk undersøgelse for tilstedeværelse af selvforstyrrelser bidrage med værdifuld differentialdiagnostisk information ved diagnosticering af såvel skizotypisk sindslidelse som Aspergers syndrom.

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# 5

## Går medicinforbruget op, når brugen af tvang går ned, eller kan det følges ad?

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**Indledning:** Siden 2013 er brugen af bæltefikseringer i Region Syddanmark faldet med 24%. I samme periode er brugen af beroligende medicin, givet mod patientens vilje, steget med 31%. Psykiatrisk Afdeling i Aabenraa deltager i projektet "Forsøg med bæltfrie afdelinger i psykiatrien", hvor lukkede voksenpsykiatriske afdelinger kan få støtte til initiativer der kan nedbringe tvang. Psykotiske, ophidsede og urolige patienter har en højere risiko for at blive udsat for tvang end andre patienter og derfor bruges antipsykotisk og angstdæmpende medicin ofte i behandlingen, men disse lægemidler kan bidrage til udviklingen af livsstilssygdomme og hermed et kortere liv. For patienternes helbred er det derfor vigtigt at mindre tvang, ikke fører til et øget medicinindtag. Præcise tal for brugen af medicin i denne situation findes ikke, og derfor er undersøgelses mål at undersøge brugen af psykofarmaka i bæltfrit afsnit og sammenligne forbruget med tidligere perioder.

**Metode:** Undersøgelsen sammenligner medicinindtag hos patienter i risiko for tvangsanvendelse (organiske sygdomme, misbrug, psykoser, mani og personlighedsforstyrrelser) indlagt på det nuværende bæltfrie afsnit i Aabenraa med den tidligere tilsvarende psykiatriske afdeling i Haderslev. Detaljerede oplysninger om patienternes faktiske medicinforbrug findes i journaler, og typer samt doser af psykofarmaka sammenlignes mellem de to perioder.

**Resultater:** Dataindsamlingen foregår i november-december 2016 og foreløbige resultater forventes klar i februar 2017.

**Diskussion og konklusion:** Resultater fra dette projekt kan sammen med den øvrige evaluering af bæltfrie afdelinger vise hvordan målrettet arbejde med at nedbringe tvang påvirker behandlingen. Præcise oplysninger om typer og doser af psykofarmaka kan give opmærksomhed om uhensigtsmæssig praksis.

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# 6

## Heritability of Neurometabolites, and their Correlation to Schizophrenia: a MRS Twin Study

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1. \*Shared first authorship

Aberrant glutamate levels have been found in unmedicated schizophrenia patients early in the disease, though differences were not pronounced in more chronic patients<sup>1,2</sup>. Genes coding for glutamate receptor subunits have been related to schizophrenia<sup>3</sup>, but heritability of glutamate levels has not been established.

21 monozygotic and 16 dizygotic proband (F2x.x) pairs, along with 22 monozygotic and 19 dizygotic healthy control pairs were included; 11 additional twins were included without their sibling. 3T [1H]-MR spectroscopy was used to obtain spectra from anterior cingulate cortex (ACC) and left thalamus for assessment of glutamate (Glu), N-acetyl aspartate (NAA), choline (Ch), creatine (Cr) and myo-inositol (mI). Additive genetic (A), common environmental (C) and unique environmental (E) effects were estimated through structural equation modeling.

NAA, Ch and Cr concentrations in the ACC were negatively correlated with schizophrenia liability. Significant heritability was found in the ACC for Glu (36%), NAA (9%), Ch (43%) and mI (38%). A significant contribution of C in thalamus was established for NAA (26%), Ch (52%), Cr (33%), and in the ACC for Cr (26%).

Establishing heritability of Glu, is a new discovery that further ties the glutamatergic circuitry to genetic variations. We found no correlation to disease liability, which is in accordance with Glu levels decreasing with illness duration<sup>4</sup>. Taken together with previous findings of altered Glu levels early in the disease<sup>1, 2</sup> our results suggest Glu, NAA and Ch in ACC as endophenotypes for schizophrenia.

2. Theberge et al., 2002
3. Kegels et al., 2012
4. Ripke et al., 2014
5. Marsman et al. 2013

## Dopamine synthesis capacity and reward processing in first-episode-psychosis

Karen Tangmose

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**Aim:** The aim of the project is to clarify the relation between changes in the dopamine synthesis capacity (DSC) in striatum and reward dysfunction and relate these to psychotic symptoms and development of akathisia and weight gain.

**Background:** Despite evidence of a central role of striatal dopamine activity in psychosis, the exact mechanisms behind the disturbance in dopaminergic transmission are still unresolved, although studies indicate that the locus of dopaminergic abnormality in schizophrenia is presynaptic. Dopamine plays an important role in the function of the reward system, movement disorders and appetite regulation. The salience hypothesis of schizophrenia has proposed that increased dopamine activity lead to aberrant assignment of salience to otherwise neutral stimuli, thereby misleading attention and providing basis for delusional beliefs. Development of antipsychotic induced weight gain and akathisia may be linked to dopaminergic function before medication start.

**Method:** We are including 40 drug-naïve patients with first-episode-psychosis. DSC is measured with positron emission tomography (PET) and reward dysfunction with functional magnetic resonance imaging (fMRI). Clinical ratings, PET and fMRI is performed before and after 6 weeks of antipsychotic treatment with aripiprazole.

**Expected outcome:** The study will examine the link between DSC, reward dysfunction and medication effect on psychotic symptoms. We hypothesize that treatment effect on psychotic symptoms is associated with a normalization of reward dysfunction and predicted by an increased DSC in striatum before treatment. Further, the relationship between dopaminergic disturbances and development of antipsychotic induced side effects will be clarified.

## Treatment Profiles in a Danish Psychiatric University Hospital Department

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**Background:** Despite concerns about rising treatment of psychiatric patients with psychotropic medications and declining treatment with psychotherapy, actual treatment profiles of psychiatric patients is largely unknown.

**Aims:** To describe patterns in the treatment of patients in a large psychiatric university hospital department.

**Methods:** A descriptive mapping of treatment of in- and outpatients in a Psychiatric Department at Aarhus University Hospital Risskov, Denmark. Information was collected by health care staff using a 25-item survey form. The p-value was calculated with a chi-squared test and  $p < 0.05$  was considered significant. The study was preceded by a pilot study on 41 patients.

**Results:** Over a 1 month period we assessed a total of 343 consecutive patients and hereof included 200 in the age range 18-90 years (mean 53.76); 86 men and 114 women. One-hundred and eighty-eight patients (94%) used psychotropic medication, 37 (19%) as monotherapy and 148 (74%) in combination with non-pharmacological therapy. Ninety-seven (49%) had psychotherapy and 104 (52%) social support. Among inpatients 21 (64%) had physical therapy, and 10 (30%) electroconvulsive therapy. In total, one-hundred and sixty-three (82%) had non-pharmacological therapy. Fifty-two (26%) patients had monotherapy and 148 (74%) polytherapy. Mean number of treatment modalities used pr. patient was 2.07 for all patients and 3.23 for inpatients.

**Conclusions:** In our department, polytherapy including non-pharmacological modalities is applied widely across all settings and patient categories. However, psychotropic medication clearly dominates as the most frequently applied treatment.

## Register follow-up of TOP: transition to psychosis

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**Background:** Long duration of untreated psychosis is associated with poor prognosis. The interest of identification of early warning signs of psychosis is increasing. TOP-team is located only in Region Sjælland, with the purpose of identifying individuals with psychosis in the surrounding community.

We aim to investigate the incidence of psychosis in individuals from TOP suspected and not suspected psychotic at time of contact.

**Methods:** Individuals in TOP included from 2012 to 2015 were merged with data on admission diagnoses (ICD10, F1-F9). To determine effect of referral from TOP a cox-model is built on diagnosis of psychosis.

**Results:** 527 (59% male) patients were included, mean age 21 years (SD 7.0). In all 448 (85%) were diagnosed F1-F9, 191 (36.2%) with F2 and 92 (17.5%) with F20. Median time to F2 and F20 were 36 days (IQR 18–76) and 56 days (IQR 28–160) respectively.

A subset of 351 patients were not suspected psychotic, however 51 (14.5%) were later diagnosed F2. Median time to F2 was 71 days (IQR 26–183). Hazard ratio 2.09 for later diagnoses F2 in patients suspected of psychosis.

**Conclusion:** TOP-study identifies patients with psychosis. However psychosis was later diagnosed in some individuals not suspected psychotic, suggesting further investigation to possible early warning signs. Early identification of psychosis may prove as valid initiative for early diagnosis of schizophrenia.

## QTc interval in individuals with schizophrenia receiving antipsychotic treatment as monotherapy or polypharmacy

Titel: Stud.med.

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Antipsychotics are associated with the polymorphic ventricular tachycardia, Torsade's de pointes, which in worst case can lead to sudden cardiac death. The QT interval corrected for heart rate (QTc) is used as a clinical proxy for Torsade's de pointes. QTc interval is prolonged by some monotherapy with antipsychotic, but it is unknown if the QTc interval is prolonged further with antipsychotic polypharmaceutical treatment. Therefore this study investigated the associations between QTc interval and antipsychotic monotherapy and antipsychotic polypharmaceutical treatment in schizophrenia and measured the frequency of QTc prolongation among the patients. The study was carried out as an observational cohort study of unselected patients with schizophrenia visiting outpatient facilities in the Region of Central Jutland, Denmark. Patients were enrolled from January 2013 through March 2015 with follow-up until June 2015. Data was collected from clinical interviews and clinical case records. ECGs were available in 65 patients and 6% had QTc prolongation. We observed no difference in average QTc interval for the whole sample of patients receiving no antipsychotics, antipsychotic monotherapy or antipsychotic polypharmaceutical treatment ( $p=0.29$ ). However, women presented longer QTc interval receiving polypharmacy than receiving monotherapy ( $p=0.01$ ). In conclusion, we recommend an increased focus on monitoring the QTc interval in woman with schizophrenia receiving antipsychotics as polypharmacy.

## The Function of Mitochondria and Oxidative Stress after Antidepressant Treatment in Rats

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**Introduction:** Major Depressive Disorder (MDD) affects 350 million people worldwide and is a leading contributor to the global burden of diseases. A correlation has been found between oxidative stress and MDD, and antidepressant treatment reduced the oxidative status and enhanced the antioxidant system. On the other hand, clinical studies have demonstrated increased oxidative damage following successful treatment of depression with both antidepressant drugs and ECT. We approached this question investigating the effects of electroconvulsive stimulation (ECS) and the MAO-inhibitor Phenelzine on the respiration of mitochondria and their production of oxidative stress.

**Method:** One group of rats received 9 ECS over a period of three weeks. Another group of rats received phenelzine (PHZ) I.P. every day for 21 days. Brain homogenate was made for the Oxygraph-2k high-resolution respirometer, (OROBOROS Instruments). The brain tissues were also analyzed for oxidative damage of RNA, 8-oxo-7,8-dihydroguanosine (8oxoGuo) using Ultraperformance Liquid Chromatography and tandem Mass Spectrometry (UPLC MS/MS). Citrate synthase was measured with a spectrophotometer.

**Results:** We found a decrease in the oxphos capacity, the electron transfer system capacity and the respiration linked to complex II substrates after ECS. ECS had no influence on the measured oxidative stress parameters. PHZ decreased the production of hydrogen peroxide but did not increase the concentration of 8-oxoGuo. Conclusion: PHZ does not alter the function of mitochondria but have antioxidant effects as shown in different studies using other methods. ECS was expected to increase oxidative stress and the study's findings illustrate the gap of knowledge on ECS and oxidative stress.



## Influences of patient informed cognitive complaints on activities of daily living in patients with bipolar disorder. An exploratory cross-sectional study

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**Background:** Many patients with bipolar disorder (BD) experience debilitating cognitive deficits, with risk of impaired occupational and psychosocial functioning. However, knowledge of how these deficits impact the patients' ability to perform Activities of Daily Living (ADL), tasks related to self-care and domestic life is limited.

**Aim:** To explore the relation between impaired cognitive function and the ability to perform ADL in patients with BD.

**Method:** A total of 42 outpatients (mean age 36 years (range 19.0-58.0 years), 69% women) with BD in remission and with subjective cognitive complaints ( $\geq 13$  on the Cognitive Complaints in Bipolar Disorder Rating Assessment questionnaire (COBRA)) were included. Objective neurocognitive function was evaluated with a short comprehensive cognitive test battery and ADL ability was evaluated with the performance-based Assessment of Motor and Process Skills (AMPS) in the homes of the patients.

**Results:** Our findings indicate that low processing speed correlated with decreased ADL ability, and processing speed as measured by the cognitive test battery thus seems to be significantly related to patients' ability to live independently in the community.

**Conclusion:** Adding a performance based test to assess ADL ability in patients with BD home-surroundings seems to provide new insights regarding the effect of cognitive impairment in patients with BD.

## Validation study of the Danish version of the Brief Negative Symptoms Scale

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**BACKGROUND:** Negative symptoms (NS) of schizophrenia are related to a great decrease in life quality among patients and relatives as well as vast public health expenditures. So far, the assessment and treatment of NS have been insufficient and because of this, there have been international efforts during the last decade to improve the general understanding of these. The Brief Negative Symptoms Scale (BNSS) was designed to evaluate NS according to the latest consensus definition. The present study will examine the validity of the Danish translation of BNSS and compare it to a range of psychopathological tests already clinically implemented.

**METHOD:** Data will be collected from 50 in- or outpatients diagnosed with either schizophrenia or schizoaffective disorder. Convergent and discriminant validity as well as inter-rater reliability will be assessed by conducting the semi-structured interviews of BNSS, Positive And Negative Symptom Scale, Calgary Depression Scale and Personal and Social Performance Scale, as well as having the participants complete the questionnaire Self-evaluation of Negative Symptoms (SNS).

**EXPECTED RESULTS:** The study is expected to find a convergent and discriminant validity and inter-rater reliability comparable to the English and Italian versions of the interview. Further, a high correlation between objective (BNSS) and subjective (SNS) assessment of NS is expected.

**PERSPECTIVES:** The validation of the Danish version of BNSS is expected to provide a novel and precise tool for evaluating the psychopathology of NS and thus lead the way for future studies in the field and eventually new and better methods of treatment.

## Efficacy of dialectical behavior therapy vs. collaborative assessment and management of suicidality treatment for reduction of self-harm in adults with borderline personality traits and disorder - a randomized observer-blinded clinical trial

Andreasson K, Krogh J, Wenneberg C, Jessen HK, Krakauer K, Gluud C, Thomsen RR, Randers L, Nordentoft M

**Background:** Many psychological treatments have shown effect on reducing self-harm in adults with borderline personality disorder. There is a need of brief psychotherapeutical treatment alternative for suicide prevention in specialized outpatient clinics.

**Methods/Design:** The DiaS trial was designed as a single-center, two-armed, parallel-group observer-blinded, randomized clinical superiority trial. The participants had at least two criteria from the borderline personality disorder diagnosis and a recent suicide attempt (within a month). The participants were offered 16 weeks of 1) dialectical behavior therapy (DBT) versus up to 16 weeks of collaborative assessment and management of suicidality (CAMS) treatment. The primary composite outcome was the number of participants with a new self-harm (non-suicidal self-injury or suicide attempt) at week 28 from baseline. Other exploratory outcomes were: severity of borderline symptoms, depressive symptoms, hopelessness, suicide ideation, and self-esteem.

**Results:** At 28 weeks, the number of participants with new self-harm in the DBT group was 21/57 (36.8%) versus 12/51 (23.5%) in the CAMS treatment (OR 1.90; 95% CI 0.80 to 4.40; P=0.14). When assessing the effect of DBT versus CAMS treatment on the individual components of the primary outcome, we observed no significant differences in the number of non-suicidal self-injury (OR 1.60; 95% CI 0.70 to 3.90; P=0.31) or number of attempted suicides (OR 2.24; 95% CI 0.80 to 7.50; P=0.12).

**Conclusion:** In adults with borderline personality traits and disorder and a recent suicide attempt DBT does not seem superior compared with CAMS for reduction of number of self-harm or suicide attempts. However, further randomized clinical trials may be needed.

## MYPLAN –mobile phone application to manage crisis of persons at risk of suicide: a multi-center, randomized clinical trial

Andreasson K, Krogh J, Bech P, Frandsen H, Buus N, Stanley B, Kerkhof A, Nordentoft M, Erlangsen A

**Background:** Persons with a past episode of self-harm or severe suicidal ideation are at elevated risk of self-harm as well as dying by suicide. Previous studies have shown that a safety plan will assist in providing instant support, when having suicide ideation, and help seeking professional assistance if needed. The aim of the trial is to compare the paper version of the safety plan with a new-developed app in reducing suicide ideation and other symptoms.

**Methods:** The trial is designed as a two-arm observer-blinded parallel group randomized clinical superiority trial, where participants will either receive: 1) Experimental intervention: the safety plan provided as the app MYPLAN, or 2) Treatment as Usual: the safety plan in a paper format. 546 participants, 273 in each arm will be recruited from Danish Suicide Prevention Clinics. Both groups will receive standard psychosocial therapeutic care, up to 8-10 sessions of supportive psychotherapy. Follow-ups will be conducted at 3, 6, 9, and 12 months after date of inclusion.

**Participants, inclusion and exclusion criteria:** All participants will be recruited from the Suicide Prevention Clinics in Denmark. In order to participate in the study, participants must have a smartphone and there is no age restriction.

**Outcomes:** Primary outcome is suicide ideation measured by Becks suicide ideation scale (BSS). Secondary outcomes are: hopelessness, depressive symptoms, WHO Well-being Index, WHO-5, client satisfaction and self-harm.

**Statistical analysis:** Data analysis will be based on intention-to-treat principle. We will examine this using repeated measurement in mixed models.

## Neural correlates of personality in reward processing

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Center for Neuropsykiatrisk Skizofreniforskning

**Introduction:** Extraversion and neuroticism are characterized by individual differences in the experience of positive and negative emotions during rewarding and punishing stimuli. Extraversion has previously been associated with increased neuronal activity in striatum during anticipation of monetary rewards, but other neural correlates have not been fully explored.

We therefore aim to investigate the relationship between extraversion and neuroticism and whole brain activity during anticipation of monetary gain and loss.

**Methods:** Functional Magnetic Resonance imaging was performed in 35 healthy subjects while they played a monetary game. Extraversion and neuroticism were measured using NEO-PIR. The relationship between brain activity during the monetary task and personality traits was investigated using FSL. We designed four contrasts: certain gain vs. neutral, uncertain gain vs. neutral, certain loss vs. neutral and uncertain loss vs. neutral.

**Results:** The whole brain analyses revealed increased prefrontal activity in all contrasts, whereas striatal activity was found only in the uncertain contrasts.

In the uncertain loss contrast, activity in prefrontal cortex (PFC), anterior cingulate cortex (ACC) and precuneus showed a negative correlation with extraversion and a positive correlation with neuroticism. In the certain win contrast, a negative correlation was found between extraversion and PFC activation.

**Conclusion:** We did not find any association between increased striatal activity and extraversion. However, low extraversion (introversion) and high neuroticism indicate increased prefrontal, precuneus and anterior cingulate activity during anticipation of uncertain loss. In addition, introversion is associated with higher prefrontal activity during anticipation of certain win.

## The role of oxidative stress in electroconvulsive therapy: Difference in young and old rats?

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**Objective:** Depression has been associated with higher levels of several markers of oxidative stress. Some studies have indicated that markers of oxidative stress increases further following treatment with either oral antidepressants or electroconvulsive therapy (ECT). We sought to investigate if oxidative stress is increased in response to ECT and if there is a difference in resilience with age.

**Method:** We used electroconvulsive stimulations (ECS), an animal model of ECT, as treatment modality and included 23 old and 23 young rats. Three markers of oxidative stress were examined: 8-oxodG, 8-oxoGuo and Ogg1. 8-oxodG and 8-oxoGuo were measured in samples of urine and CSF using UPLC-MS/MS. Hippocampal brain sections were examined using in situ hybridisation with a oligonucleotide-probe of Ogg1

**Results:**

We found no significant effect of treatment in the individual changes of 8-oxodG and 8-oxoGuo excretions in urine. When examining CSF content of 8-oxoGuo and hippocampal expression of Ogg1 we found no overall effect of treatment, but an interaction of age and treatment. 8-oxoGuo content in CSF bordered on significance between age groups in the ECS treated animals. The expression of Ogg1 mRNA showed a similar pattern with significant difference between the age groups in the ECS treated animals in two of the three regions measured.

**Conclusion:**

Overall, the study indicates that ECS is not associated with an increase in systemic or CNS oxidative stress. However, the results indicate that there may be an age-dependent difference in the effect of treatment in CNS parameters of oxidative stress.

## Glutamate and GABA in antipsychotic-naïve schizophrenia and association to treatment outcome and cognitive dysfunction

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**Background:** Animal models of schizophrenia propose that decreased Gamma-Aminobutyric acid (GABA)ergic inhibition of cortical glutamatergic neurons causes dysfunction in cortico-striato-thalamo-cortical networks. This might underlie disturbances in affect, behaviour, and cognition seen in schizophrenia.

**Methods:** Longitudinal study in progress of 40 initially antipsychotic-naïve schizophrenia patients and matched healthy controls (HC). Glutamate is measured in anterior cingulate cortex (ACC) and left thalamus, GABA in ACC, and resting cerebral blood flow (rCBF) globally during a MR scan. Clinical outcome is assessed with PANSS and cognitive measures with CANTAB.

**Results:** In the antipsychotic-naïve condition patients (n=28) have increased glutamate in thalamus (p=0.035), but not ACC, and show a trend toward decreased levels of GABA in ACC (p=0.08) compared to HC (n=28). In thalamus, glutamate decreases after 1.5 (p=0.04) and 6 months treatment (p=0.004) and in ACC GABA normalises after 1.5 and 6 months. Baseline levels of GABA in ACC correlate positively with reduction in both PANSS total (rho=0.7, p=0.007) and positive (rho=0.7, p=0.01) after 1.5 months. Patients in the antipsychotic-naïve state have increased rCBF in left thalamus (p=0.037), but not in the frontal lobe. Antipsychotic-naïve patients with glutamate and GABA levels similar to HC perform better in cognitive tests that are dependent on glutamate in studies of rodents.

**Conclusion:** Decreased GABA in ACC and increased glutamate in left thalamus is part of the pathophysiology of schizophrenia. The rCBF alterations in left thalamus, but not frontal lobe, support these findings. Interestingly, high GABA levels in ACC prior to treatment are associated with good treatment response.

## Predicting effects and risk of relapse into depression – The Danish ECT/MRI project

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**Formål:** Vi ønsker at undersøge hjernen hos patienter med svær depression før og efter Elektro-konvulsiv terapi (ECT), samt ved en kontrol efter 6 måneder med det formål at:

1. undersøge hjernevævet så en evt. skadelig effekt af ECT-behandling kan udelukkes
2. belyse mekanismerne bag ECT for at finde prædiktorer for gunstige resultater, tidligt tilbagefald og for bivirkninger
3. undersøge omfanget af og baggrunden for påvirkningen af hukommelsesfunktionen

**Metode:** I studiet planlægger vi at undersøge 60 patienter henvist til ECT på Psykiatrisk Center Glostrup, Amager og København pga. svær depression. Studiet vil gøre brug af neuronale blodprøver (BDNF, VEGF, S100B protein), MR-metoder (T1 og T2, FLAIR, DWI, DTI, Arterial spin labelling og Dynamic contrast enhanced imaging) samt et grundigt klinisk undersøgelsesprogram.

**Resultater og konklusion:** Vi håber at finde prædiktorer, der kan forudsige respons, risiko for bivirkninger og tilbagefald. Desuden vha. den mest moderne MR-teknik at belyse om ECT kan skade hjernevævet.

De nævnte prædiktorer vil muliggøre at behandlingen af de sværeste depressioner vil kunne forbedres og individualiseres i langt højere grad end i dag, hvorved sygdomsprognosen kan forbedres betydeligt. Vi forventer yderligere at være i stand til at forsikre patienterne og kolleger om behandlingens sikkerhed.



## Differences in clinical presentation between bipolar I and II disorders in the early stages of bipolar disorder: a naturalistic study

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**Aim:** In a naturalistic clinical study of patients in the early stages of bipolar disorders the aim was to assess differences between patients with bipolar I (BD I) and bipolar II (BD II) disorders on clinical characteristics including affective symptoms, subjective cognitive complaints, functional level, the presence of comorbid personality disorders and coping strategies.

**Methods:** Diagnoses were confirmed using the Structured Clinical Interview for DSM-IV Disorders. Clinical symptoms were rated with the Young Mania Rating Scale and the Hamilton Depression Rating Scale, and functional status using the Functional Assessment Short Test. Cognitive complaints were assessed using the Massachusetts General Hospital Cognitive and Physical Functioning Questionnaire, the presence of comorbid personality disorders using the Standardized Assessment of Personality - Abbreviated Scale and coping style using the Coping Inventory for Stressful Situations.

**Results:** In total, 344 patients were included (BD I (n=163) and BD II (n=181)). Patients with BD II presented with significantly more depressive symptoms, more cognitive complaints, lower overall functioning, and a higher prevalence of comorbid personality disorders. Finally, they exhibited a trend towards using less adaptive coping styles.

**Limitations:** It cannot be omitted that some patients may have progressed from BD II to BD I. Most measures were based on patient self-report.

**Conclusions:** Overall, BD II was associated with a higher disease burden. Clinically, it is important to differentiate BD II from BD I and research wise, there is a need for tailoring and testing specific interventions towards BD II.

## Adult with Autism – Oxidative stress, comorbidity and predisposition

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**Introduction:** While genetic and environmental factors are considered causal in development of autism spectrum disorder (ASD), the pathophysiology of the disorder is still not known, and the diagnosis is still based on observational and anamnestic data. Oxidative stress in children with ASD has been shown in several studies, but few have investigated whether the exposure persists into adulthood.

**Aims:** To study the level of oxidative stress in ASD along with prevalence of comorbidity, psychiatric predisposition and physical health.

**Methods:** 56 patients above age 18, diagnosed in childhood with ASD, were included, along with gender and age matched controls. Participants were interviewed regarding their health, familial predisposition and social status, and had their plasma analyzed for pro-oxidant xanthineoxidase (XO) and antioxidants superoxide dismutase 1 (SOD1) and 2 (SOD2).

**Results:** Patients with ASD showed higher levels of SOD1 (268.2 ng/ml vs. 205.6 ng/ml). Through linear regression it furthermore showed correlation with autism severity, measured by the autism quotient questionnaire (Coef. 0.0233,  $p=0.002$ ). We found no differences between case and control group regarding SOD2 and XO. There were differences at baseline between groups. Weight showed a possible influence on biomarker differences. ASD group had a higher BMI, fewer drank alcohol and more had a psychiatric diagnosis apart from ASD.

**Conclusion:** Oxidative stress seems to play a role in ASD, even into adulthood. Higher level of the antioxidant SOD1 could point to an upregulation caused by exposure to free radicals. Furthermore, patients with ASD often have psychiatric comorbidities, have families with psychiatric diagnoses, and are less healthy physically.

## Effect of GLP-1 Receptor Agonist Treatment on Body weight in Obese Antipsychotic-treated Patients with Schizophrenia: a Randomized, Placebo-controlled Trial

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ClinicalTrials.gov identifier: NCT01794429

**Aims:** Schizophrenia is associated with cardiovascular co-morbidity and a reduced life-expectancy of up to 20 years. Antipsychotics are dopamine D2 receptor antagonists and the standard of medical care in schizophrenia, but the drugs are associated with severe metabolic side effects like obesity and diabetes. Glucagon-like peptide-1 receptor agonists (GLP-1RAs) are registered for treatment of both obesity and type 2 diabetes. We investigated metabolic effects of the GLP-1RA, exenatide once-weekly, in non-diabetic, antipsychotic-treated, obese patients with schizophrenia.

**Material and Methods:** Antipsychotic-treated, obese, non-diabetic, schizophrenia spectrum patients were randomized to double-blinded adjunctive treatment with once-weekly subcutaneous exenatide (n=23) or placebo (n=22) injections for three months. The primary outcome was body weight loss after treatment and repeated measures analysis of variance was used as statistical analysis.

**Results:** Between March 2013 and June 2015, 40 patients completed the trial. At baseline, the mean body weight was 118.3±16.0 kg in the exenatide group and 111.7±18.0 kg in the placebo group, with no group differences (P=0.23). The exenatide and placebo groups experienced significant (P=0.004), however, similar (P=0.98) weight losses of 2.24±3.3 kg and 2.23±4.4 kg, respectively, after three months of treatment.

**Conclusions:** Treatment with exenatide once-weekly did not promote weight loss in obese, antipsychotic-treated patients with schizophrenia compared to placebo.

Our results could suggest that the body weight-lowering effect of GLP-1RAs involves dopaminergic signaling, but blockade of other receptor systems may also play a role. Nevertheless, anti-obesity regimens effective in the general population may not be readily implemented in antipsychotic-treated patients with schizophrenia.

## No Cognitive-enhancing Effect of GLP-1 Receptor Agonism in Antipsychotic-treated, Obese Patients with Schizophrenia

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**Objective:** Schizophrenia is associated with profound cognitive and psychosocial impairments. Glucagon-like peptide-1 receptor agonists (GLP-1RAs) are used for diabetes and obesity treatment, and animal studies have indicated cognitive-enhancing effects. In this investigator-initiated, double-blind, randomized, placebo-controlled trial, we tested non-metabolic effects of exenatide once-weekly (Bydureon™) in obese, antipsychotic-treated schizophrenia spectrum patients.

**Method:** Before and after three months of exenatide (N=20) or placebo (N=20) treatment, patients were assessed with: Brief Assessment of Cognition in Schizophrenia (BACS), Rey-Osterreith complex figure test (REY), Short Form Health Survey (SF-36), Personal and Social Performance Scale (PSP), and the Positive and Negative Syndrome Scale (PANSS). We used BACS composite score as the main outcome measure.

**Results:** Repeated measures analysis of variance on BACS composite score showed significant effect of 'Time' ( $P < 0.001$ ), no effect of 'Group' ( $P = 0.64$ ) and no 'Time\*Group' interaction ( $P = 0.77$ ). For REY, SF-36, PSP and PANSS only significant 'Time' effects were found.

**Conclusion:** The non-significant results of this first clinical trial exploring non-metabolic effects of a long-acting GLP-1RA in schizophrenia patients could reflect a general problem of translating cognitive-enhancing effects of GLP-1RAs from animals to humans, or be explained by factors specifically related to schizophrenia spectrum patients with obesity such as antipsychotic treatment.

ClinicalTrials.gov identifier: NCT01794429

## Substance use among Danish psychiatric patients - A cross sectional study

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**Background:** Patients with psychiatric disorders have an excess mortality, when compared to the general population. Use and/or abuse of substances, including alcohol, play a crucial part in this context, but the quantities used have not yet been reported in Danish psychiatric patients.

**Aim/objective:** To investigate the use of alcohol, tobacco and illicit drugs, among psychiatric patients in The Capital Region of Denmark.

**Methods:** Outpatients from five psychiatric units in The Capital Region of Denmark were asked to complete a questionnaire regarding their use of alcohol and other drugs of abuse. The questionnaire was based on the validated screening tool, the Alcohol Use Disorder Identification Test (AUDIT), supplemented by questions regarding use of tobacco and illicit drugs. Our findings were compared to data from the general Danish population.

**Results:** 412 patients participated in the study, and 32.8% had an AUDIT-score  $\geq 8$  thus indicating a possible problematic alcohol use. When compared to the background population, the psychiatric patients were more than twice as likely to be current smokers, and more than five times as likely to have a monthly use of illicit drugs. Finally, the women of the study population were nearly twice as often binge drinkers when compared to women from the background population.

**Conclusion:** Our findings demonstrate the problematic use of alcohol, tobacco and illicit drugs among Danish psychiatric patients. The disturbingly high prevalence of excess substance use should encourage further attention to the prevention and treatment of dual diagnostic patients.

## The relation between EPHX2 gene polymorphism, rate of weight change and lipid profile in Anorexia Nervosa

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Jan Magnus Sjögren, Associate Professor, PhD, Consultant, Psychiatrist

**Background:** Anorexia Nervosa (AN) is a serious eating disorder with potentially life-threatening physiologic effects. Although AN is one of the less prevalent psychiatric diseases it has one of the highest mortalities. The pathophysiology of AN is unknown, and chronicity and mortality is high. Gene Wide Association Studies (GWAS) suggest an involvement of the EPHX2 gene in the pathophysiology of AN. EPHX2 gene influence the concentration of lipids, and dyslipidemia often occurs during weight restoration in AN. However, the impact of EPHX2 on rate of weight change during weight restoration in AN, and the relation to lipid profile, is unknown. This is an essential formative step to characterizing the neurobiology of this illness.

**Objective:** Based upon findings from GWAS studies in AN, we propose to investigate the influence of the EPHX2 gene polymorphism on the rate of weight change during controlled weight restoration, and on lipid profiles in AN.

**Method:** In underweight sporadic AN patients (n=63; non-twins; 76 will be enrolled assuming 20% drop-out rate), study the rate of weight change during 4 weeks (BMI and blood sampling weekly; in total 6 times, twice at baseline) and investigate the relation to EPHX2 gene inheritance when the patients undergo a controlled individualized weight restoration diet at an in-patient ED specialized unit. The impact of EPHX2 gene polymorphism on the lipid profile in blood will also be investigated.

**Hypothesis:** The overarching hypothesis is that EPHX2 genotype, influences AN risk through interaction with lipids, and that lipid composition and concentrations contribute to the pathogenesis and prognosis of AN. This is optimally detected during restoration when AN patients undergo a controlled weight gain diet. Specific lipids may serve as biomarkers to assess response to treatment and recovery.

## The Neurophysiological Underpinnings of Self-Disorder in Schizophrenia

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Medforfattere: Vittotio Gallese, Troels W. Kjær, Josef Parnas og Julie Nordgaard

Recent interest in early prodromal detection and prevention of schizophrenia has acknowledged non-psychotic anomalous subjective experiences as an essential clinical feature of schizophrenia spectrum disorders. The aim of this project proposal is to investigate a possible connection between phenomenological experience (i.e., the mind level) in schizophrenia and neurobiological mechanisms (i.e., the brain level), explored through different physiological measures. Particularly, we aim at investigating whether a gradient-like distribution of anomalous subjective experiences and particularly self-disorders (SD) in schizophrenia, is paralleled by impairments in neurobiological domains, explored through the functions of mirror neuron mechanisms, autonomic regulations, interoceptive sensitivity (sensitivity to internal activity i.e. heartbeat monitoring) and EEG measures. This project draws upon unique psychopathological resources from the self-disorder research in Copenhagen and neuroscientific advances at Parma Universities, potentially strengthening research on schizophrenia disease vulnerability, thus providing insights into the etiology and pathogenesis of schizophrenia.

## Using the dietary quality score in an outpatient clinic for adults with ADHD

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**Objective:** The main aim of the study was to investigate the dietary quality in adult patients who were in assessment for ADHD. Furthermore, we also compared the group of adult patients with a representative sample of a healthy adult Danish population.

**Method:** Data were collected from the ADHD database operated by the ADHD outpatient clinic at Aarhus University Hospital, Risskov. We used data from newly referred patients in a seven months period from April 2014 through October 2014. Inter99 was used to assess the dietary quality score. The representative sample was obtained as a part of a public health survey from 2013 called "How are you" conducted in the same region of Denmark as the location of the outpatient clinic.

**Results:** One hundred and fortythree patients were included in the study period, 52 % males. The mean age was 30.9 years. A larger proportion of patients fall in the category "unhealthy dietary pattern" compared to the representative sample population (26 % vs 12 %), whilst on the other hand, the proportion in the "healthy dietary pattern" category is markedly lower (14 % vs 24 %). The differences are explained by lower than recommended intakes of fruits and vegetables, rather than inadequate intakes of fish and healthy fat sources.

**Conclusion:** Our findings suggests a general shift towards more unhealthy dietary patterns among patients in assessment for ADHD. This increases the risk for cardiovascular disease. Lifestyle interventions could be a necessary part of standard treatment for patients with the lowest dietary score.



## Personal Recovery with the Individual Placement and Support intervention for people with severe mental illness.

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**Introduction:** Individual Placement and Support (IPS) is an evidence based intervention where IPS consultants support people with severe mental illness in achieving competitive employment based on the individual's choice. IPS is a recovery-oriented intervention, but vast evidence regarding its ability to influence recovery-oriented outcomes challenges this position.

**Aim:** To investigate how an IPS-intervention influences the personal recovery process in people with severe mental illness.

**Method:** A qualitative phenomenological study including interview of 12 participants in an IPS intervention. Analysis was made using a four-step phenomenological analysis method.

**Results:** According to the participants IPS contributed to personal recovery in a number of ways: The IPS consultants' ability to create an equal, acknowledging and safe relationship where participants' needs were taken into consideration in the search and support for job or education was found valuable. In combination with employment the role of the IPS consultant contributed to normalization and stabilisation of participants' daily lives, changed their behaviours and beliefs about maintaining new achievements, personal goals and dreams.

**Conclusion:** Individual placement and support provides opportunities to gain personal goals and contributes to stabilisation and normalization of participants' daily lives. This study supports the notion that the individual placement and support positively influences personal recovery in people with severe mental illness.

## Opfølgning efter behandling for selvmordstanker og selvmordsforsøg

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**Formål:** Formålet med undersøgelsen er at følge op på patienter, der har været i behandling på grund af selvmordstanker og/eller selvmordsforsøg på et center for forebyggelse. Især fokuseres på resultater efter et på års forløb.

**Metode:** Patienter, der har indgået i behandling på Kompetencecenter for selvmordsforebyggelse, Psykiatrisk Center Amager er registreret for forskellige personlige og sociale parametre foruden almene demografiske parametre. Disse parametre sættes i relation efterforløb, hvor undgåelse af gentagen selvmordsadfærd er det primære resultatmål.

Resultaterne bearbejdes statistisk for enkeltparametre og de statistisk mest interessante indgår i en logistisk regression.

**Resultater:** Resultatdelen er under udarbejdelse. Der beskrivelse af kohorten.

Efterfølgende statistisk for enkeltparametre versus gentagen selvmordsadfærd.

Endelig logistisk regression for at finde mulige parametre af betydning for efterforløbet efter behandling.

**Konklusion:** Formålet er, at patienter der indgår i specialbehandling, også kan indgå i videnskabelig undersøgelse af egentlige resultater i efterforløbet.

Selve undersøgelsen har ingen egentlig kontrolgruppe. Internt kan man se på efterforløbet for dem, der starter efter selvmordsforsøg versus dem, der starter med selvmordstanker alene.

Endelig kan selve recidivniveauet sammenlignes med tidligere undersøgelsers kontrolgrupper (som ikke har fået specialiseret behandling).

## The treatment in the Danish Suicide Prevention Clinics: a qualitative description

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**Formål:** The aim of this study is to describe the psychosocial intervention offered to people at risk of suicide in out-patient settings in Denmark.

**Metode:** A qualitative study is applied to describe the psychosocial therapy from the perspective of the clinician. Data were collected through 10 semi-structured interviews with therapists. A purposive sampling strategy was selected with respect to educational backgrounds and geographical locations, i.e. across all five regions in Denmark. All interviews were transcribed verbatim and analyzed using phenomenologic condensation of meaning according to Kvale and Brinkmann aiming to identify central themes of suicide prevention therapy regarding stages of treatment: initial, intermediate and final.

**Resultater:** The study is expected to provide a detailed description of the suicide prevention therapy, normally categorized as a psychosocial or a rapid and active outreach intervention.

**Konklusion:** The study aims to conclude upon themes that characterize the psychosocial intervention as it currently takes place at the suicide prevention clinics in Denmark, 2016.

## Understanding the widowhood effect – a cross-countries mixed methods study

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**Objectives:** Widowhood increases mortality and adverse health effects, particularly depression and need for psychiatric care. The causes of this phenomenon are poorly understood. A mixed methods approach to possible causes from the perspective of the widowed may uncover important knowledge.

**Methods:** An international mixed methods study combining interviews with Danish widows/widowers and a Swedish 50-year follow-up study – The Lundby Study. Widows/widowers above 65 years of age who experience physical and mental health problems in relation to spousal loss are recruited from the general practitioner. Narrative interviews are conducted and analysed according to grounded theory. The developed theories will be tested quantitatively in The Lundby Study by comparing widows/widowers above 65 years with age- and gender matched controls who are still married.

**Results:** In the Lundby Study 597 persons above 65 years were identified in the latest follow-up: 176 (29,5%) were widowed, 421 (70,5%) were married/cohabiting. Depending on the theories developed a total of 384 possible variables regarding general living circumstances and physical and mental health can be tested.

**Conclusions:** Adverse health effects in widowhood are poorly understood. This study will contribute to unravelling possible causes and further understanding of widowhood in old age.

