PRÆVALENSEN AF SPISEFORSTYRRELSESPATOLOGI OG TILSTEDEVÆRELSEN AF SPISEFORSTYRRELSESSYMPTOMER BLANDT INDIVIDER MED EN NONBINÆR KØNSIDENTITET:

ET SYSTEMATISK REIVEW

Billede fra: Colourbox

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Den rammesættende del:
Antal tegn 54.365 svarende til 22,65 normalsider

Det systematiske review:
Antal tegn 39.185 svarende til 16,33 normalsider

Projektets samlede antal tegn (inkl. mellemrum og fodnoter, ekskl. forside, abstracts, referencelister, pensumliste og bilag):
93.550 svarende til 38,98 normalsider

ABSTRACT

Background: Existing research has shown increased eating disorder (ED) pathology in the transgender population. Since both the transgender population and the nonbinary gender population fall within the umbrella term "transgender", this association, along with the author's interest in gaining knowledge about the nonbinary population and general interest in eating disorders, founded an interest in examining whether this association also holds true within the nonbinary population.

Objective: This particular Master´s Thesis aims to examine the prevalence of overall eating disorders pathology and presence of eating disorder symptoms in individuals with nonbinary gender identities. To fulfill this objective the thesis is split into two parts: A systematic review, which is presented and written independently, and a framework outlined around the systematic review written to elaborate the research background of the systematic review, particular aspects of the issue explored and further perspectives on it. The systematic review more specifically aims to: "*summarize the existing peer reviewed literature on the prevalence of eating disorder pathology and presence of eating disorder symptoms in individuals with nonbinary gender identities"*.

Method: This systematic review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines. A systematic search was performed on February the 18th 2022 using the databases: PubMed, Embase and PsycInfo.

Results: Eight studies were included. The prevalence of ED pathology in a nonbinary population ranges from 17.2-38.01%. The prevalence of ED in a comparison group of cisgender females varies between 16.1 and 36.7%, while it ranges from 6.9-18.2% in a group of cisgender males. Thus, there seems to be no difference between nonbinary individuals and cisgender females, but a higher proportion of nonbinary individuals seem to exhibit ED pathology compared to cisgender males. In terms of ED symptoms, the included studies showed primarily either no differences between nonbinary individuals and cisgender females or that nonbinary individuals engaged less in ED symptoms. The results of the studies were more mixed regarding the comparison of nonbinary individuals with cisgender males. However, a few of the included studies, with another comparative basis, challenged the above tendencies, thus making it

unclear whether nonbinary individuals are indeed at increased risk of both overall ED pathology and ED symptoms compared to both cisgender males and cisgender females.
Discussion: The included studies have mixed outcomes and hence no clear tendencies appear. This is probably due to the limited research and the fact that the different publications differ greatly in methodology.
Conclusion: The result of this systematic review indicates no clear tendencies on the prevalence of ED pathology or the presence of ED symptomatology in individuals with nonbinary gender identities. However, despite the fact that only some of the included studies illustrate that individuals with a nonbinary gender identity exhibit more eating disorder pathology than cisgender individuals, it is still considered reasonable paying extra attention to the wellbeing of this population, taking into account the severity of EDs and how important early detection and treatment is regarding the prognosis. Moreover, in respect to the included additional perspectives on this field, it can be concluded that research currently indicates that nonbinary people are at risk of developing negative health outcomes, which supports the above conclusion. Lastly, it can be concluded that there is an obvious need for more research, using the same methodology, both in relation to eating disorder pathology and other mental health outcomes.

Indholdsfortegnelse

Bilag:

1. Læsevejledning

Dette speciale består af to dele. Den ene del udgøres af et systematisk review, som er skrevet på engelsk og som er udformet efter almindelige normer for videnskabelige tidsskrifter. Den anden del udgøres af en rammesættende del, som er skrevet på dansk og som har til formål at uddybe den forskningsmæssige baggrund for det systematiske review, særlige aspekter af den udforskede problemstilling samt yderligere perspektiver herpå. Det systematiske review vil fremkomme indlejret i den rammesættende del. Det anbefales, at læseren følger specialets struktur kronologisk.

2. Interessefelt og forskningsmæssige baggrund

Paraplybetegnelsen ”Transperson” dækker ifølge Danmarks største og ældre politiske organisation for homoseksuelle, biseksuelle, transpersoner og andre (LGBT+) over personer, hvis kønsidentitet i større eller mindre grad ikke er i overensstemmelse med det tildelte køn ved fødslen (LGBT+ Danmark, u. å; LGBT+ Danmark, 2021). Transpersoner kan undergrupperes i dem, der oplever deres kønsidentitet som binær og dem som oplever deres kønsidentitet som nonbinær (LGBT+ Danmark, 2021). Betegnelsen binære transpersoner dækker over de transpersoner, som føler sig værende enten en kvinde eller en mand og deraf betegnelsen binære, da disse accepterer den binære kønsforståelse (LGBT+ Danmark, 2021). Betegnelsen nonbinære transpersoner dækker over de transpersoner, der hverken identificerer sig med det kvindelige køn eller det mandlige køn. Denne gruppe af transpersoner accepterer således ikke den binære kønsforståelse, hvoraf betegnelsen nonbinære transpersoner er opstået (LGBT+ Danmark, 2021).

Jeg har i flere år været bevidst om, at nogle individer føler sig født i den forkerte krop og således, som Vijlbrief, Saharso & Ghorashi (2020) fremlægger, ønsker at “krydse” det binære køn. Disse individer, har jeg haft en forståelse af, var dem, der udgjorde paraplybetegnelsen ”transperson”. Det, at nogle individer hverken føler sig som mand eller kvinde, er derimod noget, jeg først er blevet bevidst om for nyligt og yderligere at disse også skal kategoriseres indenunder paraplybetegnelsen ”transperson”. Denne nye viden om at paraplybetegnelsen ”transperson” foruden at dække over binære transpersoner også dækker over nonbinære transpersoner (LGBT+ Danmark, 2021),

igangsatte en lyst til at blive klogere på sidstnævnte gruppe, som i resten af opgaven blot vil blive omtalt "nonbinære individer" for at lette læsningen. Da jeg udover denne nye interesse altid har haft en stor interesse indenfor spiseforstyrrelsesområdet, gav det mening at kombinere disse to områder med hinanden. I denne forbindelse kom jeg frem til, at det kunne være interessant, at undersøge hvad prævalensen er af spiseforstyrrelsespatologi i den nonbinære population. Til dette formål virkede det oplagt at udarbejde et systematisk review, da denne metode har til formål, gennem strenge og eksplicitte metoder, at identificere, udvælge, vurdere, analysere og opsummere empiriske studier med det formål at opsummere den bedst tilgængelige videnskabelige evidens tilgængeligt inden for et emne, hvormed besvarelse af en specifik problemformulering bliver mulig (Perestelo-Pérez, 2013). Overvejelser om at lave et individuelt studie strejfede mig dog, da jeg hermed ville kunne bidrage med ny viden. Et sådan studie vil dog ikke kunne give et lige så repræsentativt billede af prævalensen i den generelle population af nonbinære transpersoner som et systematisk review, grundet dets sammenfattelse af alle studier på indeværende område (Pandis, 2011) og derfor faldt den endelige beslutning på et systematisk review.

Nonbinære er, sammen med transpersoner, blevet mere synlige i samfundet inden for de seneste få år, hvilket har bevirket stigende forskning indenfor undersøgelse af individer med en anden kønsidentitet end det tildelte køn ved fødslen (Hendricks & Testa, 2012; Scandurra et al., 2019). Majoriteten af forskningen differentierer dog ikke mellem nonbinære individer og transpersoner og anser dem dermed som en homogen gruppe eller inddeler dem på baggrund af mand/kvinde kønsspektrummet og overser således stadig de nonbinære personer (Scandurra et al., 2019). Forskning inden for den specifikke association mellem spiseforstyrrelser og udelukkende nonbinære individer må derfor anses som værende mere begrænset end det allerede begrænsede undersøgelsesfelt omhandlede transkønnede. I relation hertil er der, så vidt jeg ved, endnu ikke publiceret noget systematisk review. Derimod er der med hensyn til transpersoner publiceret et systematisk review, som indikerer, at disse engagerer sig mere i forstyrret spisning sammenlignet med ciskønnede populationer. Af denne grund synes det yderligere meningsfuldt end blot min interesse for feltet at udarbejde et systematiske review omhandlende nonbinære personer, da det forhåbentligt kan

kortlægge, om samme tendens også gør sig gældende indenfor for den nonbinære population.

Med udgangspunkt i ovenstående anses det relevant at udarbejde et systematisk review uden nogen nedre eller øvre begrænsning for publiceringsår, da et sådan review forhåbentlig kan kaste lys over, hvad forskningen peger i retning af.

3. Problemformulering

På baggrund af ovenstående har dette speciale følgende problemformulering;

Hvilken prævalens er der af spiseforstyrrelsespatologi, samt hvilken tilstedeværelse er der af spiseforstyrrelsessymptomer, blandt individer med en nonbinær kønsidentitet i den publicerede peer-reviewed litteratur?

Problemformuleringen vil som nævnt blive belyst og besvaret gennem et systematisk review. Denne metode vil blive mere dybdegående beskrevet i afsnit 5.1 Den mest systematiske og korrekte screening og dermed den bedste besvarelse af problemformuleringen, kræver en specificering af hvad betegnelserne spiseforstyrrelse og nonbinær kønsidentitet dækker over, hvorfor disse vil blive uddybet i afsnit 4.1 og 4.2.

4. Afgrænsning

I følgende afsnit vil først betegnelsen spiseforstyrrelse blive uddybet og dernæst betegnelsen nonbinær kønsidentitet.

4.1 Spiseforstyrrelser

Nedenstående afsnit vil omfatte en definition af spiseforstyrrelser. Desuden nævnes en række symptomer og ætiologien beskrives. Derudover vil afsnittet berøre debutalderen og livstidsprævalensen for Anorexia Nervosa (AN), Bulimia Nervosa (BN) og Binge Eating Disorder (BED). I afsnittet vil komorbiditet, assesmentinstrumenter og behandling ligeledes blive omtalt.

Spiseforstyrrelser defineres som en række sub-diagnoser, der alle er karakteriseret ved patologiske bekymringer om kropsform og kropsvægt samt unormale spise adfærdsmønstre (Sauro et al., 2008). Foruden disse symptomer, der dækker alle individer med en spiseforstyrrelse, er der en række karakteristiske symptomer inde for specifikke spiseforstyrrelser. Eksempelvis karakteriseres AN ved restriktiv spiseadfærd og intens frygt for at blive fed, mens BN karakteriseres ved blandt andet overspisning og kompensatorisk adfærd og BED ved at spise indtil man føler sig ubehagelig mæt samt solitær spisning grundet skam (American Psychiatric Association, 2014). Herudover ses generelle komplikationer som øget forekomst af selvmordstanker, høj dødelighed, multisystemiske medicinske kompleksiteter og et ofte tilbagevendende og kronisk forløb, der kan vare op til flere årtier. Spiseforstyrrelser er således blandt de mest dødelige psykiatriske lidelser (Murray, 2021). Se tabel 1 for et overblik over inddelingen af spiseforstyrrelser i henholdsvis *the Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) (American Psychiatric Association, 2014) og *the 10. Edition of International Classification of Diseases and Related Health Problems* (ICD-10) (World Health Organization, 1994).

Tabel 1: ICD-10 og DSM-5 inddeling af spiseforstyrrelser

ICD-10	**DSM-5**
50.0 Nervøs spisevægring (Anorexia Nervosa)	Pica
50.1 Atypisk nervøs spisevægring (Anorexia nervosa atypica)	**307.53 (F98.21)** Regurgitationsforstyrrelse (opgylpningsforstyrrelse)
50.2 Nervøs spiseanfaldstilbøjelighed (Bulimia Nervosa)	**307.59 (F50.8)** Undgående/restriktiv spiseforstyrrelse
50.3 Atypisk nervøs spiseanfaldstilbøjelighed (Bulimia nervosa atypica)	Anorexia nervosa (nervøs spisevægring) ● (F50.01) Restriktiv type ● (F50.02) Bulimisk type
50.4 Trøstespisning (Hyperphagia associata cum perturbatione psychica alia)	**307.51 (F50.2)** Bulimia nervosa (nervøse spiseanfald)

50.5 Opkastning forbundet med anden psykisk forstyrrelse (Vomitus associatus cum perturbatione psychica alia)	**307.51 (F50.8)** Tvangsoverspisning (Binge Eating Disorder/BED)
50.8 Andre spiseforstyrrelser (Disordines alimentarii alii)	**307.59 (F50.8)** Andre spiseforstyrrelser, fx ● Atypisk anoreksi ● Bulimi (med lav hyppighed og/eller begrænset varighed) ● Tvangsoverspisning (med lav hyppighed og/eller begrænset varighed) ● Udrensende spiseforstyrrelse (purging disorder) ● Nattespisningssyndrom
50.9 Spiseforstyrrelse, uspecificeret (Disordo alimentarius, non specificatus)	**307.50 (F50.9)** Uspecificeret spiseforstyrrelse

Ætiologien af spiseforstyrrelser er kompleks og dårligt forstået (Sauro et al., 2008). Dog præsenterede Garner og Garfinkel i 1980 en model over ætiologien (Garner & Garfinkel, 1980), som der er er bred faglig enighed om og som i dag kaldes for diatese-stress modellen (Sundhedsstyrelsen, 2021). Modellen beskriver ætiologien som et multifaktorielt samspil mellem prædisponerende, udløsende og vedligeholdende faktorer (Garner & Garfinkel, 1980).

Prædisponerende faktorer udgøres jævnfør Garner & Garfinkel (1980) af henholdsvis individuelle, familiære og sociokulturelle faktorer. Individuelle faktorer, som kan disponere for spiseforstyrrelser, kan både være psykologiske og biologiske (Sundhedsstyrelsen, 2021). Af psykologiske faktorer kan nævnes personlighedstræk (Garner & Garfinkel, 1980), såsom rigiditet, ekstrem grad af perfektionisme og sort-hvid tænkning (Sundhedsstyrelsen, 2021) og historik med belastende omstændigheder såsom overgreb eller omsorgssvigt (Sundhedsstyrelsen, 2021). Eksempler på biologiske faktorer er tendens til overvægt, tidlig modenhed (Garner & Garfinkel, 1980), genetisk sårbarhed og familiær disposition (Sundhedsstyrelsen, 2021). Familiære faktorer, der kan disponere for spiseforstyrrelser, omfatter personlighedstræk i forældre, forældres attituder til vægtkontrol, kropsform og fitness

samt familie interaktionelle mønstre (Garner & Garfinkel, 1980). Sociokulturelle faktorer, inkluderer den nuværende kultur med høj grad af snævre kropsidealer, kropsfokusering samt høje krav til den enkelte, ikke kun i forhold til udseende men også i forhold til præstationer på andre områder (Sundhedsstyrelsen, 2021). Garner & Garfinkel (1980) postulerer, at mange individer besidder individuelle, familiære og sociokulturelle forløbere og at disse kan blive patologiske i konteksten af stressorer (udløsende faktorer), der kan lede til udvikling af spiseforstyrrelser.

Udløsende faktorer inkluderer jævnfør Garner & Garfinkel (1980) blandt andet forøget præstationskrav, krops forandringer i puberteten, interpersonel separation eller tab. Af yderligere udløsende faktorer kan nævnes: Ny uddannelse, nyt job, at flytte hjemmefra, vægttab (fx i relation til fysisk sygdom eller sport), alvorlig sygdom, slankekur, traumatiske hændelser, skilsmisse i familien samt dødsfald (Sundhedsstyrelsen, 2021). Sundhedsstyrelsen beskriver udløsende faktorer som værende situationer, der er forbundet med usikkerhed, præstationskrav eller et stort følelsesmæssigt pres (Sundhedsstyrelsen, 2021). Ifølge Garner & Garfinkel (1980) kan en spiseforstyrrelse dog også udløses ved blot en tilsyneladende harmløs kommentar eller begivenhed ledende til ”the fixed idea” om, at vægttab (særligt i forbindelse med anoreksi) vil forbedre følelser af utilstrækkelighed eller ineffektivitet. Et vægttab og forekomsten af effekterne af eksempelvis udsultning ved anoreksi kan herefter have feedback effekter, som vedligeholder spiseforstyrrelsen (Garner & Garfinkel, 1980).

Spiseforstyrrelsen kan vedligeholdes af biologiske og psykologiske faktorer samt af omgivelsernes reaktion (Sundhedsstyrelsen, 2021). Biologisk bevirker uregelmæssig og utilstrækkelig ernæring, ændring i mave-tarm-systemet, således at systemet tømmes langsommere, hvilket kan medføre oppustethed og ondt i maven ved mindre mængder mad (Sundhedsstyrelsen, 2021; Garner & Garfinkel, 1980). Endvidere kan sult-og mæthedsfornemmelsen blive forstyrret (Sundhedsstyrelsen, 2021). Med henblik på undervægt ses nedsat kognitiv fleksibilitet og funktion, hvilket vanskeliggør implementering af spiseændringer (Sundhedsstyrelsen, 2021). Yderligere forstyrres tænkningen omkring mæthed, sult og mad samt tolkning af kroppens signaler (Sundhedsstyrelsen, 2021). Desuden skal det nævnes, at spiseforstyrrelser kan fastholdes og forstærkes ved et (gensidigt) sammenspil mellem utilstrækkelig spisning, trang til mad, overspisning og kompenserende adfærd

(Sundhedsstyrelsen, 2021). Psykologisk kan en spiseforstyrrelse give midlertidig lindring af den stress, der er forbundet med pubertære kropsforandringer og overvældende præstationskrav (Garner & Garfinkel, 1980), idet spiseforstyrrelsen bevirker en følelse af succes, mestring og kontrol, når den lykkes (Sundhedsstyrelsen, 2021; Garner & Garfinkel, 1980). Spiseforstyrrelsen kan endvidere vedligeholdes, hvis individet ikke besidder metoder, som kan løse denne dysfunktionelle mestringsstrategi (Sundhedsstyrelsen, 2021; Garner & Garfinkel, 1980). Desuden kan omgivelsernes reaktion være medvirkende til at spiseforstyrrelsen vedligeholdes, hvis individet får ros og/eller befinder sig i et miljø, som værdsætter bestemte holdninger til udseende, krop og vægt (Sundhedsstyrelsen, 2021).

Udbruddet af en spiseforstyrrelse finder typisk sted i ungdommen eller den tidlige voksenalder (Favaro, Busetto, Collantoni & Santonastaso, 2018). I studier der har anvendt DSM-5, er det fundet, at den højeste incidensrate med henblik på Anorexia Nervosa (AN) er blandt kvinder i alderen 14-19 år med en kulmination i 14-15 årsalderen, mens den højeste incidensrate med hensyn til Bulimia Nervosa (BN) er blandt kvinder i 16-20-årsalderen (Favaro et al., 2018). I forhold til Binge Eating Disorder (BED) så bryder lidelsen typisk først ud efter 40-årsalderen (Favaro et al., 2018). Et nyligt systematisk review og meta-analyse fra 2021 fandt, at livstidsprævalensen for de tre nævnte lidelser i den generelle population er på henholdsvis 0.16% for AN, 0,63% for BN og 1.53% for BED (Qian et al., 2021).

Psykiatrisk komorbiditet er mere reglen end undtagelsen, når det kommer til spiseforstyrrelser. Forskningen viser, at 56-95% af individer diagnosticeret med en spiseforstyrrelse også vil modtage en diagnose for mindst én anden psykiatrisk lidelse i løbet af deres liv. De lidelser, der oftest ses komorbidt med spiseforstyrrelser, er: Depression, angst, særligt social angst og OCD, seksuel dysfunktion, misbrugslidelser, Posttraumatisk stress forstyrrelse (PTSD), selvskade og selvmordstanker (National Eating Disorder Collaboration).

Diagnosticering af en spiseforstyrrelse sker på baggrund af assesmentinstrumentet Eating Disorder Examination (EDE). EDE er et diagnostisk semi-struktureret interview, designet til at bedømme det fulde spektre af den specifikke psykopatologi af spiseforstyrrelser. Interviewet er opbygget omkring fire subskalaer, der måler

symptomer på forskellige spiseforstyrrelser indenfor de seneste 28 dage. Disse fire subskalaer er som følgende; kropsbekymring, vægtbekymring, spisebekymring og spiserestriktion. Symptomerne rates på en 7-point Likert skala fra 0 (ingen dage) til 6 (alle dage), hvor højere scorer repræsenterer mere alvorlig patologi. Foruden de fire subskalaer indebærer interviewet også en global score (Cooper & Fairburn, 1987). Foruden EDE findes der en række selvrapporteringsspørgeskemaer, som også måler på spiseforstyrrelsessymptomer. Af eksempler herpå kan nævnes EDE-Q (Fairburn & Beglin, 1994), EDI (Garner, Olmstead & Polivy, 1983) og EAT-26 (Garner, Olmsted, Bohr & Garfinkel, 1982). I modsætning til EDE kan disse dog som følge af deres selvrapporterings format ikke anvendes til at stille en diagnose (Ocker, Lam, Jensen, Zhang, 2007).

Med hensyn til behandling af voksne med henholdsvis BN og BED anbefaler *National Institute for Health and Care Excellence (NICE)-retningslinjerne* Enhanced Cognitive Behaviour Therapy (CBT-E) som førstevalgsbehandling, mens retningslinjerne både anbefaler CBE-T, Mantra eller SSCM til voksne med AN (Department of Psychiatry, 2017). I forhold til unge med henholdsvis BN og AN anbefaler NICE-retningslinjerne familiebaseret terapi som førstevalgbehandling, og i tilfældet af at denne behandling er ineffektiv, anbefaler de CBE-T. Til behandling af unge med BED anbefaler NICE-retningslinjerne CBT-E (Department of Psychiatry, 2017).

4.2 Nonbinær kønsidentitet

Nedenstående afsnit om nonbinær kønsidentitet vil omtale, hvad betegnelsen nonbinære kønsidentiteter dækker over. I dette indgår en beskrivelse af, hvordan nonbinære individer anser deres kønsidentitet, hvilke personlige stedord nonbinære individer kan foretrække, samt hvilke ord nonbinære individer kan anvende til at udtrykke deres nonbinære kønsidentitet. Derudover beskrives det, hvem der typisk adopterer den nonbinære kønsidentitet, hvad forekomsten af nonbinære individer er indenfor det bredere transkønnede samfund samt hvilke tiltag, der menes at have bidraget til en voksende forekomst og opmærksomhed på nonbinære individer. Sidst omtales hvilke uligheder, nonbinære individer stadig kæmper med den dag i dag.

Betegnelsen nonbinær kønsidentitet dækker over kønsidentiteter, der ikke passer ind i den binære kønsforståelse. Betegnelsens brug er således oftest en afvisning af den antagelse, at der kun findes to køn; mand og kvinde, som er baseret på det givne køn ved fødslen (Gordon, Moore & Guss, 2021). Gennem tiden har der været forskellige betegnelser for denne gruppe af individer. Historisk set har forskere anvendt betegnelsen ”gender non-conforming (GNC)”, men denne betegnelse er sjældent blevet brugt af individerne indenfor dette samfund, da betegnelsen antyder, at køn er noget, man ”*skal* tilpasse sig”, hvorfor brugen af betegnelsen er aftagende. Andre betegnelser, der også gennem tiden er blevet anvendt, er ”gender-diverse people” og ”gender-variant people”, men i dag anvendes primært betegnelsen ”nonbinary peope” (nonbinære individer) (Gory, 2021), hvorfor det også er denne betegnelse, jeg vil anvende i denne specialeafhandling.

Nonbinære individer opfatter sig hverken som kvinde eller mand, men kan derimod opfatte sig selv som værende både mand og kvinde (Graugaard & Frisch, 2019) eller som værende helt uden for den binære kønsopdeling (Cusack & Galupo, 2020). I denne forbindelse findes der blandt andet på dansk nogle nonbinære personlige stedord såsom: ”Huan”, ”hen” og ”høn” (Dhejne & Giraldi, 2019). Endvidere findes en række forskellige ord, nonbinære individer kan anvende til at udtrykke deres nonbinære kønsidentitet. Nogle af disse er ”agender”, ”neutrois”, ”xenogender”, ”genderqueer”, ”gender-fluid”, ”genderflux”, ”bigender”, ”demigender”, ”intergender” og ”pangender” (Gory, 2021; Gordon, Moore & Guss, 2021). Disse ord er, på trods af at de alle hører under den nonbinære kønsidentitet paraply, ikke nødvendigvis synonyme, hvorfor det er vigtigt, at man ved, hvad ordene specifikt refererer til, før man benytter et af dem, således at man omtaler det enkelte individ i overensstemmelse med, hvordan individet identificerer sig (Gory, 2021). I forhold til ovenstående ord, henviser ”agender” og ”neutrois” til individer, der ikke identificerer sig som noget køn (Gory, 2021). ”Xenogender” refererer til individer, der definerer sine egenskaber uden nogen som helst tilknytning til mand eller kvinde (Gory, 2021). Betegnelserne ”genderqueer”, ”gender-fluid” og ”genderflux” refererer til individer, der oplever et svingende eller flydende køn (Gory, 2021). Betegnelserne ”bigender”, ”demigender”, og ”intergender” henviser til individer, der læner sig mere op imod det ene køns

identitet fremfor det andet (Gory, 2021). Sidst refererer ”pangender” til individer, hvis kønsidentitet omfatter hele kønsspektrummet (Gory, 2021).

Ifølge Barbee & Schrock, (2019) er det særligt universitetsstuderende, der adopterer den nonbinære kønsidentitet, som følge af et syn på det binære køn som værende en forældet og irrelevant social fiktion (Barbee & Schrock, 2019). Størstedelen af de nonbinære individer identificerer sig med det bredere transkønnede samfund, men adskiller sig fra andre transkønnede, ved ikke at identificere sig som hverken mand eller kvinde (Barbee & Schrock, 2019). Nylig forskning har anslået en forekomst på 25-35% af nonbinære individer indenfor dette samfund (Barbee & Schrock, 2019). Det totale antal er dog ukendt og med stor sandsynlighed voksende (Dhejne & Giraldi, 2019), da det, at kategorisere sig eksplicit som værende nonbinær, er blevet mere normalt siden de tidlige 2000 (Barbee & Schrock, 2019). Foruden et voksende antal individer er der indenfor de seneste årtier kommet en øget opmærksomhed på nonbinære individer, hvilket vurderes at skyldes forskellige tiltag (Barbee & Schrock, 2019). Herunder kan nævnes transaktivisme omkring adgang til offentlige toiletter, kategorisering i juridiske dokumenter, kønsneutralt sprog samt Facebooks tilføjelse af 58 nye kønskategorier (Barbee & Schrock, 2019).

På trods af denne øgede opmærksomhed og det dermed voksende rum for nonbinære individer, kæmper denne gruppe stadig med blandt andet diskrimination, vold, chikane (Vijlbrief, Saharso & Ghorashi, 2020) og social eksklusion, hvilket har en negativ indflydelse på denne gruppes psykologiske velbefindende (Taylor, Zalewska, Gates, Millon, 2019).

5. Uddybning af metodiske overvejelser

Følgende afsnit vil indeholde en redegørelse for, hvordan et systematiske review udarbejdes. Dernæst vil enkelte dele af det systematiske review blive yderligere uddybet med et specifikt fokus på dette specialets problemformulering.

5.1 Det systematiske review

Systematiske reviews er sekundære studier, der gennem strenge og eksplicitte metoder identificerer, udvælger, vurderer, analyserer og opsummerer empiriske studier.

Formålet er at opsummere den bedst tilgængelige videnskabelige evidens inden for et bestemt emne, således at en specifik problemformulering kan besvares (Perestelo-Pérez, 2013). For at sikre samme struktur og metodologiske kvalitet på tværs af systematiske reviews, har organisationer og forskningsgrupper, såsom "The Cambell Collaboration", "The PRISMA Group" og "The Cochrane Collaboration", udviklet nogle retningslinjer for udarbejdelse af et systematisk review. Disse forskellige retningslinjer indebærer en enighed om, at udviklingen af et systematisk review kræver en forudgående udarbejdelse af en protokol, der guider hele udviklingsprocessen på en reproducerbar og eksplicit måde (Perestelo-Pérez, 2013). Protokollen for indeværende systematiske review fremgår af bilag 1. Ud over en protokol kan de forskellige retningslinjer komprimeret siges at involvere nedenstående syv trin (Perestelo-Pérez, 2013):

Trin ét: "Formuleringen af problemet" indebærer udarbejdelse af en specifik og klar problemformulering på baggrund af PICOS formatet (Perestelo-Pérez, 2013), som vil blive uddybet i afsnit 5.2.1.

Trin to: "Informationssøgning" indebærer identifikation af tilgængelige videnskabelige evidensstudier (via databasesøgning), hvormed besvarelse af forskningsspørgsmålet muliggøres.

Inden databasesøgningen er det dog nødvendigt at gennemgå en systematisk proces for at udarbejde en klar strategi for selve søgningen. Den systematiske proces indebærer en definition af; 1) hvilke elektroniske databaser der benyttes, 2) de nødvendige informationskilder til identifikation af studier, 3) bekræftelse af referencelister, 4) gennemgang af rapporter og kommunikation af interesser og 5) en søgning i hånden efter videnskabeligt bevis. Når definitionerne er klarlagt, er strategien klar, og søgningen kan finde sted (Perestelo-Pérez, 2013). De elektroniske databaser, der blev udvalgt og anvendt i det systematiske review, beskrives i afsnit 5.2.2.

Trin tre: "Forhåndsudvælgelse af studier og udvælgelse af inkluderede studier" indebærer forhåndsudvælgelse af potentielle relevante studier og derefter udvælgelse af de studier, der skal indgå i det systematiske review. Denne udvælgelsesproces kan afhjælpes ved udarbejdelse af en tjekliste over inklusions-og eksklusionskriterier (Perestelo-Pérez, 2013). Se afsnit 5.2.3 for dette systematiske reviews inklusions-og

eksklusionskriterier. Selve udvælgelsesprocessen er en systematisk proces, der omfatter tre faser. Fase ét indebærer forhåndsudvælgelse af potentielle relevante studier på baggrund af studiernes titel og abstract. Denne udvælgelsesproces skal indebære mindst to uafhængige bedømmere. I tilfælde af tvivl om hvorvidt et studie skal inkluderes eller ej, anbefales det at inkludere studiet til næste screeningsfase (Perestelo-Pérez, 2013). Fase to omfatter, at de forhåndsudvalgte studier i samarbejde bliver gennemgået af bedømmerne. Er der uenigheder mellem bedømmerne, skal disse løses gennem diskussion. Kan uenighederne ikke løses, inkluderes studiet til fase tre (Perestelo-Pérez, 2013). Fase tre omfatter fuldtekstlæsning af de forhåndsudvalgte studier, for dermed at udvælge de endelige studier der skal bedømmes, analyseres og syntetiseres. Bedømmerne skal fuldtekstlæse studierne uafhængigt af hinanden, hvorefter de igen i samarbejde skal gennemgå de inkluderede studier. Opstår der uenigheder, skal disse diskuteres, og ved manglende enighed skal en tredje uafhængig bedømmer inddrages. I denne fase anbefales det, at man begrunder årsagen til eksklusion, og at alle diskussioner og uenigheder mellem bedømmere bliver dokumenteret i en logbog (Perestelo-Pérez, 2013).

Trin fire: ”Kritisk gennemgang og vurdering af risikoen for bias i de inkluderede studier” indebærer med hensyn til den kritiske gennemgang en omfattende læsning og detaljeret analyse af alle de oplysninger, der rapporteres i det enkelte studie, hvorunder følgende tre aspekter skal tages i betragtning: 1) Studiets metodologiske validitet, 2) vurdering af præcision og omfanget af analysen af resultaterne og 3) anvendeligheden af studiets resultater og konklusioner i forhold til den undersøgte problemformulering. Med hensyn til vurderingen af risikoen for bias findes der forskellige strategier, såsom brug af tjeklister, kvalitetsvurderingsskalaer og evaluering af individuelle komponenter. Dog er ingen af disse frie for begrænsninger. Det anbefales, at mindst to bedømmere uafhængigt af hinanden foretager den kritiske gennemgang og vurderingen af risikoen for bias for derefter at løse potentielle uoverensstemmelser. Kan disse ikke løses, inddrages en tredje bedømmer (Perestelo-Pérez, 2013).

Trin fem: ”Data udtrækning” indebærer indsamling af de mest relevante informationer fra hver enkelt inkluderet studie. De informationer der typisk skal indsamles, omfatter blandt andet; forfatter og år for udgivelse, type og karakteristika af studiedesignet, studiets varighed, antal og karakteristika af deltagerne, beskrivelse

af intervention, sammenligningsalternativer, frafald under opfølgning, fund konklusioner og konflikter af interesse. Hvis der i denne fase ekskluderes nogle studier, skal årsagen nedskrives. Dataudtrækning anbefales at udføres af mindst to uafhængige bedømmere, som løser deres uenigheder ved inddragelse af en tredje bedømmer (Perestelo-Pérez, 2013).

Trin seks: "Analyser og synteser af den videnskabelige evidens" indebærer kombinering, integration og opsummering af de vigtigste hovedresultater af de inkluderede studier. Hvis de inkluderede studier anvender samme statistiske estimater, samt har data, der er homogene, kan en metaanalyse udføres. Er studiernes data heterogene, er en kvalitativ syntese formentlig mere passende (Perestelo-Pérez, 2013).

Trin syv: "Fortolkning af resultaterne" indebærer at bedømmerne præsenterer fundene klart, refleksivt og diskuterer den videnskabelige evidens samt præsenterer konklusionerne på en passende måde (Perestelo-Pérez, 2013).

De nævnte trin, og deres tilhørende strenge metoder, har som skrevet til formål at sikre samme struktur og metodologiske kvalitet på tværs af systematiske reviews (Perestelo-Pérez, 2013). De strenge metoder har dog også andre fordelagtige formål. De har eksempelvis også til formål at gøre udviklingen af det systematiske review eksplicit og reproducerbar (Perestelo-Pérez, 2013). Denne eksplicitte udvikling af et systematisk review har endvidere til funktion at reducere bias, som er til stede i mere traditionelle reviews, hvor der netop ikke følges en systematisk og eksplicit metode for søgning, udvælgelse og analyse af informationer (Perestelo-Pérez, 2013). Slutteligt har de strenge metoder det primære formål at skabe et systematisk review, som kan facilitere en beslutningsproces baseret på den bedst tilgængelige evidens (Perestelo-Pérez, 2013). Denne egenskab gør systematiske reviews til et særlig betydningsfuldt redskab for sundhedspersonale, da de ansatte hurtigt og nemt kan blive opdateret, og efterfølgende træffe den mest korrekte beslutning (Perestelo-Pérez, 2013).

I forhold til de tre føromtalte forskningsgrupper; "The Cambell Collaboration", "The PRISMA Group" og "The Cochrane Collaboration" tilstræbes i dette speciale at leve op til retningslinjerne fra The PRISMA Group. The PRISMA Group retningslinjer

består af en 27-items tjekliste, som fremgår af bilag 2 samt et flowdiagram (Page et al., 2021).

5.2 Uddybning af specialets systematiske review

I følgende afsnit vil PICOS formatet, som indgår i første trin af udarbejdelsen af et systematisk review, blive uddybet. Dernæst vil de valgte elektroniske databaser, der indgår i trin to, blive beskrevet. Herefter vil databasernes emneordsregistre samt de udarbejdede fritekstord, der også er involveret i trin to, blive beskrevet. Sidst vil de udvalgte inklusions-og eksklusionskriterier, som er involveret i trin fire, blive fremlagt.

5.2.1 PICOS

PICOS formatet, der anvendes til at udarbejde en tydelig og klart defineret problemformulering, består af fem komponenter. Disse komponenter er som følgende; 1) beskrivelse af deltagere, 2) interventioner, 3) sammenligning, 4) udkom og 5) type af design (Perestelo-Pérez, 2013).

Af specialets problemformulering fremgår det, at jeg ønsker at undersøge individer med en nonbinær kønsidentitet og en spiseforstyrrelse, hvormed mit forskningsspørgsmål indeholder den første komponent af PICOS.

Med hensyn til komponenten, intervention, er dette aspekt udeladt i min problemformulering, da jeg ikke fandt det meningsfuldt at inkludere. Jeg ønsker netop ikke at undersøge en intervention. Det gik således op for mig, at på trods af PICOS anbefaling om hvad en problemformulering bør indeholde, kan man ikke leve op til denne for enhver pris.

En sammenligningsgruppe, PICOS tredje komponent, er ønskværdig, idet det er vanskeligt at udtale sig om betydningen af forekomsten af spiseforstyrrelser i den nonbinære population, hvis den ikke holdes op mod en anden forekomst, eksempelvis forekomsten af spiseforstyrrelse i den ciskønnede population. Dog er der ikke inkluderet en sammenligningsgruppe i mit forskningsspørgsmål, da det blot er ønskværdigt, men ikke nødvendigt, at de inkluderede studier har en sammenligningsgruppe.

PICOS fjerde komponent, udkom, fremkommer ikke tydeligt i problemformuleringen, men betragtes i dette systematiske review som værende spiseforstyrrelse.

Den sidste komponent, type af design, er særlig vigtig, da ikke alle design er lige pålidelige og valide (Perestelo-Pérez, 2013). Det fremkommer ikke tydeligt ud fra min problemformulering, men jeg ønsker kun at inkludere kvantitative studier til besvarelse af problemformuleringen. Årsagen hertil er, at jeg ønsker at undersøge en forekomst og dermed udelukkende har behov for studier, der har nogle kvantitative resultater.

Opsummerende har jeg udarbejdet en problemformulering, der så vidt muligt lever op til PICOS formatet.

5.2.2 Databaser

I dette systematiske review blev følgende tre elektroniske databaser anvendt; PubMed (UCN Biblioteket, u. å.), Embase (Eriksen, Christensen & Frandsen, 2016) og PsycInfo (KP Bibliotek, 2021). At der anvendes tre databaser, skyldes at Perestelo-Pérez (2012) anbefaler brugen af minimum tre databaser.

PubMed er en biomedicinsk og sundhedsvidenskabelig database, som dækker forskningslitteratur indenfor adfærdsvidenskab, bioteknologi, biovidenskab og kemisk videnskab (UCN Biblioteket, u. å.). PubMed inkluderes i dette systematiske review som det ene værktøj til litteratursøgning, da PubMed er den database, de fleste sundhedsvidenskabelige kliniker og forskere anbefaler (Eriksen, Christensen & Frandsen, 2016). Dog dækker PubMed ikke hele den sundhedsvidenskabelige forskningslitteratur, hvorfor PubMed-søgninger bør suppleres med søgninger i andre databaser, der også dækker sundhedsvidenskabelig forskningslitteratur (Eriksen, Christensen & Frandsen, 2016). Embase anbefales i denne forbindelse som et supplement til PubMed (Eriksen, Christensen & Frandsen, 2016), hvorfor Embase er inkluderet som endnu et værktøj til litteratursøgningen. Embase er en sundhedsvidenskabelig og medicinsk database med særligt fokus på at afdække farmakologisk forskningslitteratur, hvilket også understreges af, at halvdelen af emneordene i Embase er kemiske- og lægemiddeltermer (Eriksen, Christensen &

Frandsen, 2016). PsycInfo er det tredje og sidste værktøj, der er inkluderet til litteratursøgningen, da denne database adskiller sig fra de to andre ved at være en database, der afdækker forskningslitteratur indenfor psykologi og psykologiske aspekter indenfor relateret områder såsom psykiatri, sociologi, pleje, uddannelse, farmakologi, og medicin, antropologi med mere (KP Bibliotek, 2021). PsycInfo kan således bidrage med at indfange endnu flere relevante videnskabelige evidensstudier end brugen af blot PubMed og Embase.

Opsummerende har jeg valgt at inkluderer ovenstående databaser, da de både supplerer og adskiller sig fra hinanden, hvilket muliggør identifikationen af flest mulige relevante videnskabelige evidensstudier.

5.2.3 Emneordsregistre og fritekstord

Litteratursøgningen i databaserne blev foretaget på baggrund af databasernes kontrollerede emneordsregistre samt ved søgning på en blok af fritekstord.

Med hensyn til kontrollerede emneordsregistre anvendte jeg i PubMed, Embase og PsycInfo henholdsvis ”MeSH” (PubMed emneordsregistre) (Eriksen, Christensen & Frandsen, 2016),”Emtree” (Embase emneordsregistre) (Eriksen, Christensen & Frandsen, 2016) og ”Thesaurus” (PsycInfo emneordsregistre) (M. Library Research Guides, 2022). MeSH, Emtree og Thesaurus består hver især af lister af kontrollerede overordnede ordforrådstermer. Disse overordnede ordforrådstermer dækker over underliggende og mere udspecificerede emneord og fungerer således som emneklassifikationer for psykologiske begreber. Jeg anvendte nævnte emneordsregistre, da de har den fordelagtige funktion at forenkle litteratursøgningsprocessen samt at gøre denne nemmere og mere succesfuld (Eriksen, Christensen & Frandsen, 2016; M. Library Research Guides, 2022).

Foruden anvendelse af MeSH, Emtree og Thesaurus supplerede jeg søgningen med en blok af fritekstord. Denne blok bestod af ord, som nonbinære individer typisk anvender til at udtrykke deres nonbinære kønsidentitet samt de forskellige tidligere nævnte paraplybetegnelser. Årsagen til dette supplement skyldes, at der endnu ikke er udarbejdet nogle standardiserede og kontrollerede ordforrådstermer, der udelukkende dækker begrebet ”nonbinære individer”, hvorfor det syntes nødvendig at udarbejde en

sådan blok, for at indfange flest mulige studier der omtaler nonbinære individer. Blokken indebar blandt andet følgende ord: ”agender” OR ”neutrois” OR ”xenogender” OR ”genderqueer” OR ”gender-fluid” OR ”genderflux” OR ”pangender” OR ”bigender” OR ”demigender” OR ”intergender” OR ”gender non-conforming” OR ”gender-diverse people” OR ”gender-variant” OR ”nonbinary gender identitiy”.

Blokken blev via et ”and” koblet på de forskellige ordforrådstermer omhandlende spiseforstyrrelser i henholdsvis MeSH, Emtree og Thesaurus, da jeg ønskede at indfange studier, der både omhandler spiseforstyrrelser og nonbinære individer.

Opsummerende udgøres søgestrengene i de tre databaser således af ordforrådstermer og en selvstændig udarbejdet blok af fritekstord rettet mod indfangning af studier, der omtaler nonbinære individer, for dermed at få så dækkende søgestrenge som muligt. De respektive søgestrenge i PubMed, Embase og PsycInfo ses i bilag 3.

5.2.4 Inklusions-og eksklusionskriterier

Inklusions-og eksklusionskriterier har, som tidligere nævnt, til funktion at lette udvælgelsesprocessen (Perestelo-Pérez, 2012). Inden udvælgelsesprocessen i de forskellige databaser, udarbejdede jeg af denne grund en række inklusions-og eksklusionskriterier. Nogen af nedenstående inklusionskriterier bærer præg af at være brede, hvilket skyldes, at mængden af forskningslitteratur indenfor relationen mellem spiseforstyrrelser og nonbinære kønsidentiteter er begrænset, idet der er tale om et nyt forskningsfelt (Romano & Lipson, 2021).

Det blev besluttet kun at inkludere kvantitative studier i det systematiske review, da jeg ønsker at undersøge forekomster, hvorfor netop kvantitative studier er de mest anvendelige. Herudover er det besluttet kun at inkludere peer-review studier, da peer-review studier som hovedregel er blevet sikret for at have en god kvalitet og videnskabelighed (KP Bibliotek, 2014).

Endvidere inkluderes kun studier, der har fokus på både nonbinære kønsidentiteter og spiseforstyrrelser. Med henblik på paraplybetegnelsen nonbinære kønsidentiteter inkluderes alle underliggende former for nonbinære kønsidentiteter.

Det er ikke et krav, at deltagerne skal være diagnosticeret som nonbinære. Deltagerne skal bare identificere sig selv som værende nonbinære.

Med henblik på spiseforstyrrelser blev det bestemt, at deltagerne skal være bedømt via et målbart assesmentinstrument. I denne forbindelse godtages blandt andet følgende assesmentinstrumenter; EDE, EDE-Q, EDI, EAT-26, SCOFF. Det er ikke et krav, at studierne rapporterer på spiseforstyrrelse som det primære udkom. Dog er det et krav, at studierne har nogle individuelle tal for deltagerne med spiseforstyrrelse. I forhold til duplikationer af data inkluderes kun datasættet med det højeste antal af nonbinære individer med spiseforstyrrelse.

Med hensyn til eksklusionskriterier blev studier, der ikke er skrevet på engelsk, norsk, svensk eller dansk ekskluderet. Endvidere er det besluttet at ekskludere casestudier samt håndbøger, konferencenotater og manualer. Sidst ekskluderes systematiske reviews og metaanalyser.

I dette systematiske review er der ikke nogen begrænsninger på udgivelsesår eller på sample størrelse og ej heller noget krav til, at de inkluderede studier skal indeholde en kontrolgruppe. Dette skyldes som tidligere nævnt, at det er et begrænset forskningsfelt, hvorfor sådanne begrænsninger ikke giver mening. Nævnte inklusions- og eksklusionskriterier fremgår af nedenstående tabel 2.

Tabel 2: Inklusions- og eksklusionskriterier

Inklusionskriterier	**Eksklusionskriterier**
Kvantitative studier (skal indeholde nonbinære individer)	Studier, som ikke er engelske, svenske, norske eller danske
Kvantitative studier (skal indeholde kvantitative målinger af spiseforstyrrelse)	Casestudier
Peer-reviewed studier	Håndbøger, konference notater, manualer
Bedømmelse af spiseforstyrrelse ved brug af et målbart assesmentinstrument	
Studier der ikke rapporterer på spiseforstyrrelse som primære udkom, men som måler på spiseforstyrrelse, som et delelement.	
Duplikation af data: Datasæt med højest antal af nonbinære individer med spiseforstyrrelse	

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6. Artikel

The Prevalence of Eating Disorders Pathology and Presence of Eating Disorder Symptoms in the Nonbinary Gender Population: A Systematic Review

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ABSTRACT

Background: Existing research showing an increased eating disorder (ED) pathology in the transgender population led to an interest in investigating whether an increased prevalence applies to the nonbinary population.

Objective: To summarize the existing peer reviewed literature on the prevalence of EDs pathology and presence of ED symptoms in individuals with nonbinary gender identities.

Methods: A literature search following the PRISMA guidelines was conducted in PubMed, Embase and PsycInfo.

Results: The prevalence of ED pathology in a nonbinary population ranges from 17.2-38.01%. The prevalence of ED in a comparison group of cisgender females varies between 16.1 and 36.7%, while it ranges from 6.9-18.2% in a group of cisgender males. Thus, there seems to be no differences between nonbinary individuals and cisgender females, but a higher proportion of nonbinary individuals seems to exhibit ED pathology compared to cisgender males. In terms of ED symptoms, the included studies showed primarily either no differences between nonbinary individuals and cisgender females or that nonbinary individuals engaged less in ED symptoms. The results of the studies were more mixed regarding the comparison of nonbinary with cisgender males. However, a few of the included studies, with another comparison basis, challenged the above tendencies, thus making it unclear whether nonbinary individuals are indeed at increased risk of both overall ED pathology and ED symptoms compared to both cisgender males and cisgender females.

Discussion: This systematic review is influenced by the minimal amount of literature and the fact that the methodology used in the publications generally differ greatly.

Conclusion: In conclusion, no definite tendencies were found.

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Background

Eating disorders (EDs) is a term for a number of sub-diagnoses, all of which are characterized by pathological concerns about body shape and weight, as well as abnormal eating behaviors (Sauro, Ravaldi, Cabras, Faravelli & Ricca., 2008). ED has a significant impact on social functioning and quality of life (Qian et al., 2021). In addition, individuals with an ED can develop severe somatic and psychiatric complications that can cause a elevated risk of mortality and suicide (Qian et al., 2021; Galmiche, Déchelotte, Lambert & Tavolacci., 2019).

The etiology of ED is complex and poorly understood (Sauro et al., 2008). However, there is a broad agreement that the etiology should be explained in terms of the diathesis-stress model (Sim & Peterson., 2021), a model presented by Garner and Garfinkel in 1980 (Garner & Garfinkel., 1980). The model describes the etiology as an interaction between predisposing, precipitating and perpetuating factors (Garner & Garfinkel.,1980) thus presenting the etiology as being multifactorial. In light of this model, an interaction between presumed predisposing factors such as neurobiology, genotype and personality traits, and precipitating factors such as adverse environmental, sociocultural and developmental contexts may predispose an individual to develop an ED (Sim & Peterson., 2021). Adolescents and young adults are particularly likely to develop EDs, with an overrepresentation of girls and young women (Galmiche et al., 2019; Sauro et al., 2008). The prevalence of EDs has increased over the last decades (Sauro et al., 2008). Early detection is crucial in ensuring the best help for the increasing number of individuals who develop EDs, because this is associated with improved prognosis, reduction in mortality and morbidity, and reduced risk of developing a more chronic condition. Furthermore, early detection is associated with prevention of the risk of psychosocial, psychiatric and somatic complications (Kalindjian, Hirot, Stona, Huas & Godart., 2021).

Most of the existing research has investigated ED only within the group of cisgender girls and women (Coelho et al., 2019). However, concurrently with transgender and nonbinary individuals gaining more attention in our society in recent years (Hendricks & Testa, 2012), research is gradually leaving this one-sided focus. To our knowledge, only one systematic review on transgender individuals has been published, and it indicated that transgender people engage more in disordered eating compared to cisgender populations (Jones, Haycraft, Murjan & Arcelus, 2016). As transgender and nonbinary individuals both belong under the term “transgender” (Solomon, 2021), it is interesting whether similar tendencies are found regarding nonbinary individuals and ED pathology. To the best of our knowledge, no systematic review investigating ED pathology in nonbinary individuals has yet been published. This field of research is thus even more limited than the sparse research on transgender individuals. Nevertheless, research in the field of nonbinary individuals is just as important as it would be critical to overlook any minority, considering the severity of EDs and how important early detection and treatment is regarding the prognosis. Nonbinary gender identity is an umbrella term, encompasses several identities, all of which have in common that they indicate nonconformity to gender stereotypes (Vijlbrief, Saharso & Ghorashi., 2020). Nonbinary individuals may, for example, have a gender that moves between genders (e.g., genderfluid), a gender composed of elements of both the male and female genders (e.g., Two Spirit), a gender that is

situated outside the binary (e.g., genderqueer), as well as reject having a gender (e.g., agender) (Hastings, Bobb, Wolfe, Amaro Jimenez, & Amand., 2021).

Aim of the study

The aim of this systematic review was to review the existing peer reviewed literature on the prevalence of ED patology and the presence of ED symptoms in individuals with nonbinary gender identities.

Methods

This systematics review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines (Page et al., 2021).

Search strategy

A literature search was conducted on February 18th 2022 in the databases PubMed, Embase.com and PsycInfo via APA. The search strategy was developed by the chief librarian (CS) Medical Library, Aalborg University Hospital in cooperation with the authors. The search strategy was developed in PubMed and subsequently translated into the other databases. We searched for eating disorders, bulimia, binge eating, anorexia nervosa and transgender/non-binary personalities or sexualities, using both controlled vocabularies, i.e., MeSH and Emtree terms and natural language terms for their synonyms. The search was limited to articles in English, Danish, Norwegian, and Swedish resulting in 1420 unique citations. Duplicates were removed using Endnote and Rayyans duplicate identification strategies. The search strategy for PubMed is presented in Figure 1.

Figure 1: The search strategy for PubMed

("Feeding and Eating Disorders"[MeSH Terms] OR "disordered eating*"[Text Word] OR "anorex*"[Text Word] OR "bulimia*"[Text Word] OR "binge eating*"[Text Word] OR "OSFED"[Text Word] OR "EDNOS"[Text Word] OR "eating disorder*"[Text Word] OR "overeating"[Text Word] OR "ARFID"[Text Word] OR "avoidant restrictive food intake disorder*"[Text Word]) AND ("agender"[Text Word] OR "a gender*"[Text Word] OR "neutrois"[Text Word] OR "genderqueer*"[Text Word] OR "gender queer*"[Text Word] OR "gender fluid*"[Text Word] OR "genderfluid*"[Text Word] OR "pangender"[Text Word] OR "pan gender*"[Text Word] OR "bigender"[Text Word] OR "bi gender*"[Text Word] OR "intergender*"[Text Word] OR "inter gender*"[Text Word] OR "gender divers*"[Text Word] OR "gender nonconform*"[Text Word] OR "gender non conform*"[Text Word] OR "gender variant*"[Text Word] OR "gender incongru*"[Text Word] OR "gender minority*"[Text Word] OR "non binar*"[Text Word] OR "nonbinar*"[Text Word] OR "transgender*"[Text Word] OR "transsexual*"[Text Word] OR "gender dysphor*"[Text Word] OR "trans person*"[Text Word] OR "trans people*"[Text Word] OR "transpeople*"[Text Word] OR "trans sexual*"[Text Word] OR "sexual dysphor*"[Text Word] OR "gender disorder*"[Text Word] OR "gender identit*"[Text Word] OR ("Sexual and Gender Disorders"[MeSH Terms] OR "Transgender Persons"[MeSH Terms] OR "Transsexualism"[MeSH Terms] OR "Gender Dysphoria"[MeSH Terms])) AND ("english"[Language] OR "danish"[Language] OR "norwegian"[Language] OR "swedish"[Language])

Inclusion and exclusion criteria

All studies obtained from the literature search were screened as to inclusion and exclusion criteria by two of the authors blinded to each other (AHN and SMR). To be included in the review, the studies had to be peer-reviewed in order to ensure a good quality of the studies. Moreover, it was decided only to include quantitative studies, and the studies had to focus on both nonbinary gender identities and eating disorder/eating disorder symptoms. The studies had to apply a measurable assessment instrument of eating disorders, such as EDE, EDE-Q, EDI, SCOFF or SCID. The studies were not required to report on eating disorders as the primary outcome. However, the studies had to have some individual data for participants with an eating disorder or eating disorder symptoms. No measurable assessment instrument was required regarding nonbinary gender identities. The participants just needed to identify themselves as being nonbinary. Regarding duplications of data, it

was decided only to include the data set with the highest number of nonbinary individuals with eating disorder pathology. Studies not written in Danish, Swedish, Norwegian, or English, and case studies, conference notes, manuals, handbooks, posters, and editorials were excluded.

Data items

Data on first author, publication year, journal, sample type, participants, sample size, cisgender comparison group, measurement tools and outcomes were extracted from the included studies in the systematic review when possible. See Table 1.

Table 1: Methodological details for included studies and results

First author, year, title, and journal.	Sample type	Nonbinary participants, mean (age), age (range)	Cisgender comparison group (CCG)	Measurement tools	Outcome
Arikawa et al. (2021) Results of an Online Survey about Food Insecurity and Eating Disorder Behaviors Administered to a Volunteer Sample of Self Described LGBTQ+ Young Adults Aged 18 to 35 Years *Journal of Academy of Nutrition and Dietetics.*	Volunteer sample of self-described LGBTQ+ young adults aged 18 to 35 years in the USA recruited via flyers and e-mails.	N = 58 (24.2 %) Gender non-conforming individuals	N = 93 (38.8%) females N = 29 (12.1%) males	**ED pathology:** EDE-Q EAT-26	**EDE-Q Global scale:** No significant difference between groups when it comes to "No disorder pathology (score < 2.8)", stated in number and percent. No significant difference between groups when it comes to "Eating disorder pathology (score ≥ 2.8)", stated in number and percent. **EAT-26:** No significant difference between groups when it comes to "Not at risk (score ≤ 20) of eating disorder", stated in number and percent. No significant difference between groups when it comes to "At risk (score > 20) of eating disorder", stated in number and percent. No significant difference between groups when it comes to "EAT-26 behaviors" stated in number and percent. Knowledge: Five disordered eating behaviors were examined: Binge eating, vomiting, use of laxatives or diet/water pills, > 1 behavior, treated for eating disorder
Cusack et. al. (2020) Body checking behaviors and eating disorder pathology among nonbinary individuals with androgynous appearance ideals *Eating and Weights Disorder – Studies on Anorexia, Bulimia and Obesity*	Sample of nonbinary adults in the U.S recruited primarily through social networking sites and online forums centered on sexual orientation and gender identity.	N = 194 nonbinary individuals Differentiated in: N = 20 Agender N = 1 bigender N = 32 Gender queer/fluid N=141 Nonbinary Age(range) for the majority 18-24 (63.40%)	No CCG	**ED pathology:** EDE-Q **Gender congruence:** GCLS **Body image:** BAS **Body checking behavior:** BCQ	**EDE-Q:** Mean (SD) = 1.92 (1.53) **GCLS:** Mean (SD) = 2.80 (0.56) **BAS:** Mean (SD) = 3.04 (0.96) **BCQ:** Mean (SD) = 51.72 (18.08)

Duffy et al. (2021) Measurement and Construct Validity of the Eating Disorder Examination Questionnaire Short Form in a Transgender and Gender Diverse Community Sample *American Psychological Association*	Transgender and gender diverse Community Sample in the USA recruited by social media, community organizations, and chainreferral, sampling.	N = 27 (38.0%) Nonbinary individuals Mean (age): 23.9 Age(range): 18–30	No CCG	**ED pathology:** EDE-QS	**EDE-QS:** Mean (SD) = 0.91 (0.11)
Lipson et al. (2019) Gender Minority Mental Health in the U.S.: Results of a National Survey on College Campuses *American Journal of Preventive Medicine*	Sample of 65,213 students at 71 colleges and universities across the U.S. recruited via e-mail.	N = 598 gender nonconforming/ genderqueer Differentiated in: N = 460 Gender non-conforming/ Genderqueer FAB N = 138 Gender non-conforming/ Genderqueer MAB Age(range): ≥ 18	N = 43.388 Cisgender females N = 20.505 Cisgender males	**ED pathology:** The five-item SCOFF questionnaire	Nonconforming/genderqueer (all) exhibited greater eating disorder symptoms than all cisgenders stated in percent. Nonconforming/genderqueer FAB exhibited greater eating disorder symptoms than all cisgender females stated in percent. Nonconforming/genderqueer MAB exhibited greater eating disorder symptoms than cisgender males stated in percent.
Mitchell et al. (2021) The effect of misgendering on body dissatisfaction and dietary restraint in transgender individuals: Testing a Misgendering-Congruence Process. *International Journal of Eating Disorder*	Sample of transgender participants recruited from U.S.-based transgender-focused blogs, online communities, websites, and snowball sampling	N = 47 Nonbinary individuals Mean (age) (SD): 28.89 (11.3)	No CCG	**ED pathology:** The restraint subscale of EDE-Q **Misgendering frequency** **Gender congruence:** TCS **Body dissatisfaction:** BPSS-R	**The restraint subscale of EDE-Q:** Mean (SD) = 1.69 (1.8) **Misgendering frequency:** Mean (SD) = 3.16 (1.0) **TCS:** Mean (SD) = 3.94 (1.0) **BPSS-R** Mean (SD) = 3.54 (0.7).

Nagata et al. (2020) Community norms for the Eating Disorder Examination Questionnaire (EDE-Q) among gender-expansive populations *Journal of Eating Disorder*	Sample of adults who identify as a sexual and/or gender minority (SGM) in the U.S. recruited via digital advertisements and communications, in-person outreach, and distribution of promotional materials.	N = 973 Differentiated in: N = 135 Gender-expansive individuals assigned male at birth N = 838 Gender-expansive individuals assigned female at birth Age(range): ≥ 18	N = 723 Cisgender women from Luce et al. (2008) N = 404 Cisgender men form Lavender et al (2010)	**ED pathology:** EDE-Q Single question: Has a mental health professional or physician ever told you that you have an eating disorder such as anorexia nervosa, bulimia nervosa, or binge eating disorder?"	**EDE-Q Eating Attitudes:** No differences between gender-expansive assigned male at birth and gender-expansive assigned female at birth in terms of the four EDE-Q subscales (EDE-Q Restraint, EDE-Q Eating Concern, EDE-Q Weight Concern, EDE-Q Shape Concern) and in terms of the EDE-Q global score stated in mean (SD) and in terms of disordered eating behaviors. Age-matched gender-expansive individuals compared with cisgender females scored significantly higher stated in mean (SD) on EDE-Q Shape Concern ($p < .001$), but significantly lower on EDE-Q Restraint ($p < .001$). Age-matched gender-expansive individuals compared with cisgender males scored significantly higher stated in mean (SD) on EDE-Q Eating Concern ($p < .001$), EDE-Q Weight Concern ($p < .001$), EDE-Q Shape concern ($p < .001$), and EDE-Q Global ($p < .001$). **EDE-Q Disordered eating behaviors:** Age-matched gender-expansive individuals compared with cisgender females showed significantly lower frequencies of self-induced vomiting ($p < .001$), laxative misuse ($p < .001$), and excessive exercise ($p < .001$) stated in percent. Age-matched gender-expansive individuals compared with cisgender males showed significantly lower frequency of objective binge episodes ($p < .001$), and excessive exercise ($p < .001$), compared to cisgender men stated in percent. Knowledge: Five disordered eating behaviors were examined: Dietary restraint, objective binge episodes, self-induced vomiting, laxative misuse, excessive exercise. **Single question:** Overall, 13.8% of participants reported being told by a mental health provider or physician that they had an eating disorder, including anorexia nervosa (6.1%), bulimia nervosa (2.5%), binge eating disorder (2.1%), or other/not specified (3.6%).

Roberts et al. (2020) Disparities in disordered eating between gender minority and cisgender adolescents *International Journal of Eating Disorder*	Subsample from a larger, online, cross-sectional survey of gender minority and cisgender adolescents aged 14–18 in the U.S. recruited via two sets of paid advertisements on Facebook and Instagram.	N = 492 Nonbinary Differentiated in: N = 441 (20.9 %) Nonbinary/ questioning AFAB N = 51 (0.02 %) Nonbinary/ questioning AMAB Mean (age) (SD) of the nonbinary/ questioning AFAB: 15.9 (1.2) Mean (age) (SD) of the nonbinary/ questioning AMAB: 16.14 (1.0)	N = 688 (32.6%) Cisgender females N = 231 (10.9%) Cisgender males	**ED pathology:** EPSI	**EPSI Disordered eating behaviors:** No differences between nonbinary AFAB and Nonbinary AMAB in terms of disordered eating behaviors stated in mean (SD). Nonbinary/questioning AFAB adolescent compared to cisgender females engaged in significantly greater caloric restriction ($p < .001$) and muscle building ($p < .001$) but endorsed significantly less in excessive exercise than cisgender girls ($p < .001$) stated in mean (SD). Nonbinary/questioning AMAB adolescent compared to cisgender males engaged in significantly greater purging ($p = .037$) but significantly less excessive exercise ($p = .009$) than cisgender boys stated in mean (SD). <u>Knowledge:</u> Six disordered eating behaviors were examined: binge eating, cognitive restraint, purging, caloric restriction, excessive exercise, and muscle building.
Romano et al. (2021) Weight Misperception and Thin-Ideal Overvaluation Relative to the Positive Functioning and Eating Disorder Pathology of Transgender and Nonbinary Young Adults *American Psychological Association*	Sample of 3.371 adult students from 78 campuses in the U.S who identified as trans men, trans women, or genderqueer/gender nonconforming or had a self-identified TNB identity.	N = 1.651 Genderqueer/ Gender non-conforming Mean (age) (SD): 21.27 (4.07)	No CCG	**ED pathology:** The five-item SCOFF questionnaire	545 (38.01%) screened positive for an ED (AN or BN) (SCOFF ≥ 2). 167 (11.59%) self-reported lifetime ED diagnosis

<u>Abbreviations:</u>

ED assessment instruments: EAT-26 = The Eating Attitudes Test 26, EDE-Q = The Eating Disorder Examination-Questionnaire, EDE-QS = The Eating Disorder Examination Questionnaire Short Form, EPSI = The Eating Pathology Symptoms Inventory.

Gender congruence assessment instruments: GCLS = The Gender Congruence and Life Satisfaction Scale, TCS = The Transgender Congruence Scale.

Body satisfaction assessment instruments: BPSS-R = The Body Parts Satisfaction Scale Revised, BAS-2 = The Body Appreciation scale-2.

Other: BCQ = The Body Checking Questionnaire, FAB = female at birth, MAB = Male at birth, AFAB = assigned female at birth, AMAB = assigned male at birth.

Eating disorder (ED) assessment instruments used in the included studies

Table 2 illustrates the various ED assessment instruments used in the included studies. All the assessment instruments, except the SCOFF, are self-report questionnaires, which means that a diagnosis cannot be made based on them. A diagnosis can only be made by trained professionals in a clinical setting (Ocker, Lam, Jensen, Zhang, 2007). Although the SCOFF is not self-reporting, a diagnosis cannot be made based on this instrument either (Lipson et al., 2019). It is thus important to note that when the studies refer to "eating disorder pathology" this does not refer to clinically significant eating disorders, as none of the studies use a diagnostic instrument.

Gender congruence and body satisfaction assessment instruments used in the included studies

Table 3 below illustrates the gender congruence and body satisfaction/body appreciation assessment instruments employed in the included studies.

Results

Literature search

The literature search provided a total of 1948 relevant studies. Removal of duplicates in Endnote resulted in 1431 studies, which were imported to Rayyan, and another 11 duplicates

Table 2: ED assessment instruments

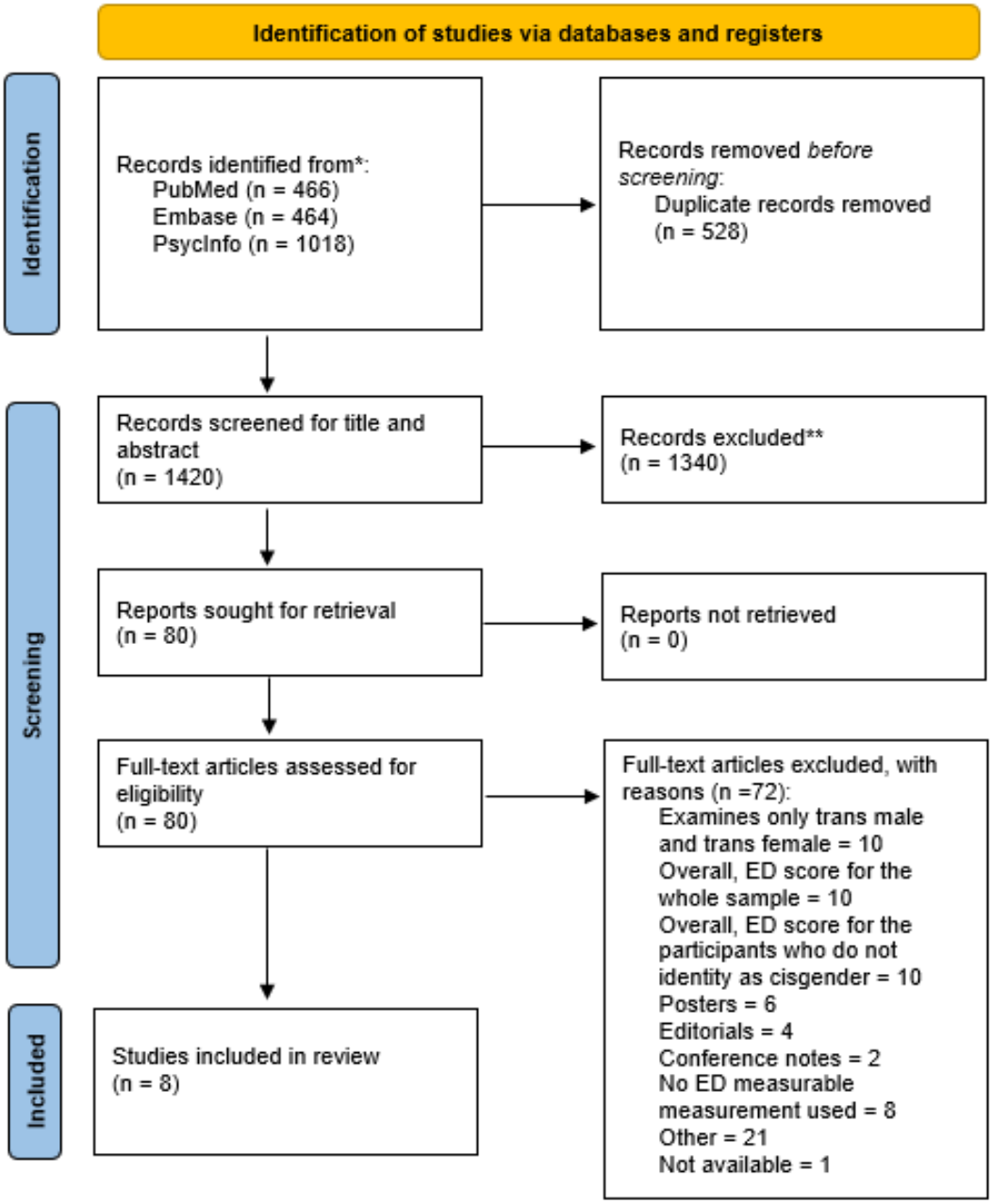
Assessment instrument	Description
The Eating Attitudes Test 26 (EAT-26)	EAT-26 is a 26-item self-report questionnaire that measures eating disorder symptoms. The EAT-26 involves three factors: Bulimia and Food Preoccupation, Oral Control and Dieting. The EAT-26 response scale is a 6-point Likert scale ranging from 1 (never) to 6 (always), with higher scores representing more severe pathology (Garner, Olmsted, Bohr, Garfinkel, 1982; Ocker, Lam, Jensen, Zhang, 2007).
The Eating Disorder Examination-Questionnaire (EDE-Q)	EDE-Q is a 28-item self-report questionnaire based on the diagnostic semi-structured interview the Eating Disorder Examination (EDE) (Fairburn & Beglin, 1994; Cooper & Fairburn, 1987). The EDE-Q measures eating disorder symptoms within the past 28 days and involves four subscales: EDE-Q Restraint, EDE-Q Eating Concern (EDE-Q EC), EDE-Q Weight Concern (EDE-Q WC) and EDE-Q Shape Concern (EDE-Q SC). It also involves an EDE-Q global score. The response scale consists of a 7-point scale, ranked from 0 (no days) to 6 (all days), with higher scores representing more severe pathology (Fairburn & Beglin, 1994).
The Eating Disorder Examination Questionnaire Short Form (EDE-QS)	EDE-QS is a 12-item self-report questionnaire that measures the severity of eating disorder symptoms within the past week. The EDE-QS is based on the EDE-Q from which the 12 items are extracted. It consists of a 4-point scale, ranging from 0 (0 days) to 3 (6-7 days), with higher scores representing more severe pathology. An EDE-QS total score is derived from the item responses (Gideon et al., 2016).
The five-item SCOFF questionnaire	The five-item SCOFF questionnaire consists of five questions that screen for eating disorder pathology. Respondents indicate whether each item is applicable (1 = yes) or not applicable (0 = no). Higher scores reflect greater eating disorder pathology (Morgan, Reid & Lacey, 1999).
The Eating Pathology Symptoms Inventory (EPSI)	EPSI is a 45-item self-report questionnaire that measures eating disorder pathology within the past 28 days using eight scales: Body Dissatisfaction, Binge Eating, Cognitive Restraint, Excessive Exercise, Restricting, Purging, Muscle Building, and Negative Attitudes Toward Obesity. The response scale consists of a 5-point scale ranging from never (0) to very often (4). Higher scores indicating higher levels of eating disorder pathology (Forbush et al., 2013).

Table 3: Gender congruence and body satisfaction assessment instruments

Assessment instrument	Description
The Gender Congruence and Life Satisfaction Scale (GCLS)	GCLS is a 38-item self-report questionnaire that assesses change and measures improvements in gender (in)congruence, related mental well-being, and life satisfaction throughout the process of undergoing gender affirming medical interventions (Jones, Bouman, Haycraft & Arcelus, 2019). GCLS involves seven subscales: 1) psychological functioning, 2) genitalia, 3) social gender role recognition, 4) physical and emotional intimacy, 5) chest, 6) other secondary sex characteristics and 7) and life satisfaction. GCLS also involves a global scale. The seven subscales can be divided into two clusters: 1) gender congruence (genitalia, chest, other secondary sex characteristics, and social gender role recognition) and 2) gender-related mental well-being and general life satisfaction (physical and emotional intimacy, psychological functioning, and life satisfaction). GCLS response scale is a 5-point Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied). Thereby, higher scores represent a higher level of body satisfaction (Jones, Bouman, Haycraft & Arcelus, 2019).
The Transgender Congruence Scale (TCS)	TCS is a 12-item self-report questionnaire that measures individuals' sense of congruence between their gender identity and external appearance. TCS involves two factors/subscales: Appearance Congruence and Gender Identity Acceptance. TCS also involves a total scale. TCS response scale is a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree) (Kozee, Tylka & Bauerband, 2012).
The Body Parts Satisfaction Scale Revised (BPSS-R)	BPSS-R is a 15-item self-report questionnaire measuring individuals' satisfaction with 14 body features. The last item examines the overall body satisfaction. BPSS-R involves two factors: Satisfaction With Body and Satisfaction With Face. BPSS-R response scale is a 6-point Likert scale ranging from 1 (extremely dissatisfied) to 6 (extremely satisfied). Higher scores represent greater body dissatisfaction (Petrie, Tripp & Harvey, 2002).
The Body Appreciation scale-2 (BAS-2)	BAS-2 is a 10-items self-report questionnaire that measure positive body image. The assessment instrument assesses an individual´s respect, acceptance, and favorable opinions toward their bodies. Examples of items include: "I take a positive attitude towards my body" and "I am comfortable in my body". BAS-2 response scale is a 5-point scale ranging from 1 (never) to 5 (Always). Thus, higher scores indicate a more positive body image. From the item responses, an average BAS-2 score is derived (Tylka & Wood-Barcalow, 2015).

were subsequently removed. In the initial screening phase (title and abstract screening) two authors (AN and SR) independently reviewed the 1420 studies according to the inclusion and exclusion criteria outlined above. Next, the two authors (AHN and SMR) conducted consensus-rating, discussing any disagreement on the included articles. If the discussion did not lead to a consensus, the study in question was included for phase three. A total of 80 studies were included to full-text reading in phase three. The full-text reading was performed by one author (AN). Seventy-two studies were excluded for different reasons, and eight studies were ultimately included as they met the inclusion criteria. A detailed description of the screening process and the exclusion reasons for the 72 studies can be seen in Figure 2.

Figure 2. Flow Diagram, PRISMA 2020



Qualitative synthesis

Eight studies were included in this systematic review. Among them, six focused on overall ED pathology stated in percentage or/and mean (SD) in the nonbinary population (Arikawa et al., 2021; Cusack et. al., 2020; Duffy et al., 2021; Lipson et al., 2019; Nagata et al., 2020; Romano et al., 2021).

Furthermore, two of these together with another two studies focused on ED symptoms (Arikawa et al., 2021; Nagata et al., 2020; Roberts et al., 2020; Mitchell et al., 2021). Four of the included studies had cisgender comparisons groups (Arikawa et al., 2021; Lipson et al., 2019; Nagata et al., 2020; Roberts et al., 2020). Two of these compared

nonbinary individuals with cisgender females and cisgender males, respectively (Arikawa et al., 2021; Nagata et al., 2020), while the other two compared nonbinary individuals assigned female at birth (AFAB) with cisgender females and nonbinary individuals assigned male at birth (AMAB) with cisgender males, respectively (Lipson et al., 2019; Roberts et al., 2020).

The results from the included studies that did not differentiate the nonbinary respondents in AFAB and AMAB showed that the overall ED pathology prevalence in the nonbinary population ranged from 17.2% to 38.01% (Arikawa et al., 2021; Romano & Lipson., 2021) and in mean (SD) from 1.92 (1.53) to 2.1 (1.4) (Cusack & Galupo., 2020; Arikawa et al., 2021). The results showed that the prevalence of ED pathology in the comparison group of cisgender females ranged from 16.1% to 36.7% (Arikawa et al., 2021; Arikawa et al., 2021) and that the prevalence of ED in the comparison group of cisgender males ranged from 6.9% to 18.2% (Arikawa et al., 2021; Arikawa et al., 2021). Thus, no difference in the prevalence of ED pathology was found when comparing the nonbinary group with the group of cisgender females. However, a higher prevalence of ED pathology was found in the nonbinary group compared to cisgender males. Regarding ED symptoms, the included studies showed primarily either no differences between nonbinary individuals and cisgender females or that nonbinary individuals engaged less in ED symptomatology. The results of the studies were more mixed regarding the comparison of nonbinary with cisgender males.

The above picture illustrating no difference between the nonbinary population and cisgender females regarding both the prevalence of ED pathology and ED symptoms is challenged by the two included studies with a different comparison basis. The one study examining overall ED pathology found that nonbinary AFAB exhibited more ED than cisgender females (16.33% vs. 11.12%) (Lipson et al., 2019) and the other study examining different disordered eating behaviors found that nonbinary AFAB engaged more in some behaviors compared to cisgender females (Roberts et al., 2020). Thus, the overall picture of prevalence of ED in the nonbinary population is unclear.

The following sections will elaborate on the varying findings regarding the prevalence of ED and presence of ED symptoms in the nonbinary population.

Overall, ED pathology

Two studies compared nonbinary participants with cisgender females and cisgender males regarding the proportion of participants exhibiting ED pathology, respectively (Nagata et al., 2020; Arikawa et al. 2021). Nagata et al. (2020), who age-matched gender expansive individuals with cisgender males and cisgender females, respectively, and thus had two groups of nonbinary participants, reported the result in mean (SD) using EDE-Q. Arikawa et al. (2021) only had one group of gender nonconforming respondents and reported the outcome in percentage using both EDE-Q and EAT-26. Based on EDE-Q, Arikawa et al. (2021) found a higher proportion of nonbinary respondents exhibiting ED pathology than cisgender male respondents and conversely that a greater proportion of cisgender female respondents exhibited ED pathology compared to nonbinary respondents. However, both Arikawa et al. (2021) and Nagata et al. (2020)

found a higher proportion of nonbinary respondents exhibiting ED pathology than both cisgender females and cisgender males with the use of EAT-26 and EDE-Q, respectively. Despite these differences, Arikawa et al. (2021) found no statistically significant differences on frequencies among the three gender identity groups both regarding the use of EDE-Q and EAT-26. In contrast to Arikawa et al. (2021), Nagata et al. (2020) found a significantly higher score on EDE-Q global stated in mean (SD) in age-matched participants with a gender expansive identity compared to cisgender males. However, in accordance with Arikawa et al. (2021), Nagata et al. (2020) found no difference between age-matched gender expansive participants and cisgender females. See Table 4 for an overview of the percentage figures from Arikawa et al. (2021) as well as an overview of the results stated in mean (SD) from Nagata et al. (2020).

Romano & Lipson (2021) also investigated the prevalence of ED in nonbinary individuals. However, this study did not have any cisgender comparison group. Romano & Lipson (2021) found that 38.01% of the genderqueer/gender nonconforming participants screened positive for an ED (SCOFF $\geq$ 2) and thus is in accordance with the percentage finding of Arikawa et al. (2021) with the used of EDE-Q. Another two studies using EDE-Q had no cisgender comparison group (Cusack & Galupo., 2020; Duffy et al., 2021). However, these two differ from Romano & Lipson (2021) as they reported their result in mean (SD) instead in percentage. The study by Cusack & Galupo (2020) found an EDE-Q score stated in mean (SD) on 1.92 (1.53). The study had a cutoff point of 2.2 for EDE-Q, thus the participants' score did not meet this. Duffy et al., (2021), who used EDE-QS found an EDE-QS, total score stated in mean (SD) of 0.91 (0.11).

Lastly, the study by Lipson et al. (2019) also deserves to be mentioned, as it also examined

Table 4: Prevalence and mean (SD) of eating disorder pathology

		Nonbinary participants	Cisgender females	Cisgender males	Assessment instrument
Arikawa et al. (2021)		17.2%	16.1%	6.9%	EAT-26 (cutoff score > 20)
Arkawa et al. (2021)		32.6%	36.7%	18.2%	EDE-Q (cutoff score ≥ 2.8)
Arkawa et al. (2021)		Mean (SD) = 2.1 (1.4)	Mean (SD) = 2.3 (1.3)	Mean (SD) = 1.8 (1.0)	EDE-Q (cutoff score ≥ 2.8)
Nagata et al. (2020)	Age-matched with cisgender females	Mean (SD) = 1.76 (1.36)	Mean (SD) = 174 (1.30)		EDE-Q
	Age-matched with cisgender males	Mean (SD) = 1.74 (1.36)		Mean (SD) = 1.09 (1.00)	

Table 4: *The prevalence and mean (SD) of nonbinary respondents, cisgender females and cisgender males exhibiting eating disorder pathology, respectively.*

ED pathology using the 5-item SCOFF screen (SCOFF ≥ 3). However, in contrast to Nagata et al. (2020) and Arikawa et al. (2021), this study gives percentage figures for both genderqueer all, genderqueer assigned female at birth (FAB), genderqueer assigned male at birth (MAB) as well as percentage figures for cisgender all, cisgender females and cisgender males. By comparing the reported figures for each group of genderqueer individuals with their respective cisgender group, it is illustrated that Lipson et al. (2019) found a higher prevalence of ED symptoms in genderqueer FAB compared to cisgender females (16.33% vs. 11.12%), a higher prevalence of ED symptoms in genderqueer MAB compared to cisgender males (10.15% vs. 4.77%), and a higher prevalence of ED symptoms for nonbinary all compared to cisgender all (14.43% vs. 8.37%).

ED symptoms

Two studies compared nonbinary participants with cisgender females and nonbinary participants with cisgender males in terms of different disordered eating behaviors, respectively (Nagata et al., 2020, Arikawa et al., 2021). For this purpose, Nagata et al. (2020) used EDE-Q, and Arikawa et al. (2021) used EAT-26. Both studies examined the following three behaviors: Objective binge eating, self-induced vomiting and laxative misuse.

When comparing nonbinary with cisgender females, both studies found no significant differences regarding objective binge eating. In respect to self-induced vomiting, Nagata et al. (2020) found that age-matched gender-expansive participants reported significantly lower frequencies compared to cisgender females ($p < .001$), while Arikawa et al. (2021) found no significant differences between gender non-conforming participants and cisgender females. Lastly, regarding laxative misuse, Nagata et al. (2020) found that age-matched gender-expansive participants reported significantly lower frequencies compared to cisgender females ($p < .001$) while Arikawa et al. (2021) found no significant differences between gender non-conforming participants and cisgender females. Besides these three behaviors, Nagata et al. (2020) also examined dietary restraint and excessive exercise. In terms of dietary restraint, Nagata et al. (2020) found no significant differences between age-matched gender-expansive participants and cisgender females ($p .562$). Regarding excessive exercise, Nagata et al. (2020) found a significantly lower frequency in age-matched gender expansive participants compared to cisgender females ($p < .001$). Arikawa et al. (2021) also examined the frequency of "exhibiting more than one behavior" and the frequency of "treated for ED", and they found no significant differences between nonconforming individuals and cisgender females.

In terms of the comparisons of nonbinary with cisgender males, both studies found no significant differences regarding both self-induced vomiting and laxative misuse. However, Nagata et al. (2020) found that gender-expansive participants reported a significantly lower frequency of objective binge episodes compared to cisgender males ($p < .001$), while Arikawa et al. (2021) found no significant differences between gender non-conforming individuals and cisgender males. Arikawa et al. (2021) found no significant differences between gender nonconforming individuals and cisgender males in terms of "exhibiting more than one behavior" and

"treated for ED". In terms of dietary restraint, Nagata et al. (2020) found no significant differences between the gender non-conforming individuals and cisgender males. Regarding excessive exercise, Nagata et al. (2020) found that gender expansive participants engaged significantly less in this behavior compared to cisgender males ($p < .001$).

Overall, the two studies did not find any significant difference between the nonbinary participants and the cisgender participants with respect to the three disordered eating behaviors, or that nonbinary engaged significantly less in the mentioned behaviors compared to cisgenders.

Roberts et al. (2021) examined a range of different disordered eating behaviors using EPSI. However, this study differs from Nagata et al. (2020) and Arikawa et al. (2021) by differentiating the nonbinary participants into adolescents nonbinary/questioning assigned female at birth (AFAB) and adolescents nonbinary/questioning assigned male at birth (AMAB) and thus compared nonbinary/questioning AFAB adolescents with cisgender girls and nonbinary/questioning AMAB adolescents with cisgender boys. Roberts et al. (2021) examined the disordered eating behaviors: Caloric restriction, purging, excessive exercise, and muscle building. The comparison of nonbinary/questioning AFAB with cisgender girls showed that nonbinary/questioning AFAB engaged significantly more in caloric restriction ($p < .001$) and muscle building ($p < .001$) compared to cisgender girls. However, nonbinary/questioning AFAB engaged significantly less in excessive exercise ($p < .001$) compared to cisgender girls. No difference between the two groups were found in terms of purging. ($p = 1.000$). The comparison of nonbinary/questioning AMAB with cisgender boys showed that nonbinary/questioning AMAB engaged significantly more in purging ($P = .037$), but significantly less in excessive exercise ($p < .009$). No differences between the two groups were found in terms of caloric restriction ($p = .247$) and muscle building ($P = .949$).

In sum, Roberts et al. (2021) found that both nonbinary/questioning AFAB and nonbinary/questioning AMAB compared to cisgenders girls and cisgender boys respectively, engaged significantly more in some disordered eating behaviors, but significantly less in others, and that for some behaviors no significant difference exists. See table 5 on the next page for an overview of the results on disordered eating behaviors from the three studies presented in this section.

One study compared, respectively, nonbinary participants with cisgender females and nonbinary participants with cisgender males in respect to the four EDE-Q subscales: EDE-Restraint, EDE-Q eating Concern (EDE EC), EDE-Q Weight Concern (EDE WC) and EDE-Q Shape Concern (EDE SC) (Nagata et al., 2020). This study by Nagata et al. (2020) found that participants with a gender expansive identity scored significantly higher stated in mean (SD) on EDE-Q EC, EDE-Q WC, EDE-Q SC compared to cisgender males. No significant differences were found concerning EDE-Q Restraint. With reference to the comparison of gender expansive participants to cisgender females, Nagata et al. (2020) found that participants with a gender expansive identity scored significantly higher on EDE-Q SC but significantly lower on EDE-Q

Restraint. No significant differences were found concerning EDE-Q EC and EDE-Q WC. The study by Mitchell, MacArthur & Blomquist (2021) also examined the subscale EDE-Q Restraint. However, this study had no cisgender comparison group. The results showed that nonbinary participants scored 1.69 (1.8) stated in mean (SD) on this subscale. Thus, this score compared to the findings on EDE-Q Restraint from Nagata et al. (2020) in the two groups of gender expansive individuals (1.15 (1.46) match with cisgender male and 1.15 (1.45) match with cisgender female) was higher.

Nonbinary individuals AFAB vs AMAB in terms of ED symptomatology

Two studies provided figures of nonbinary individuals AFAB and nonbinary AMAB in regard to disordered eating behaviors (Nagata et al., 2020; Roberts et al., 2020), thus making it possible to compare these two groups. Nagata et al. (2020) examined the four EDE-Q subscales (EDE-Q Restraint, EDE-Q Eating Concern, EDE-Q Weight Concern, EDE-Q Shape Concern), the EDE-Q global score and five disordered eating behaviors (dietary restraint, objective binge episodes, self-induced vomiting, laxative misuse, and excessive exercise), while Roberts et al. (2020) considered five disordered eating behaviors (binge eating, cognitive restraint, purging, caloric restriction, excessive exercise and

Table 5: Disordered eating behaviors

	Nagata et al. (2020)		**Arikawa et al. (2021)**		**Roberts et al. (2021)**	
	Age-matched gender expansive participants compared with cisgender females	Age-matched gender expansive participants compared with cisgender males	Gender non-conforming participants compared with cisgender females	Gender non-conforming participants compared with cisgender males	Adolescents nonbinary/ questioning assigned female at birth (AFAB) compared with cisgender girls	Adolescents nonbinary/ questioning assigned male at birth (AMAB) compared with cisgender boys
Dietary restraint	■	■			+	■
Objective binge eating	■	–	■	■		
Self-induced vomiting	–	■	■	■		
Laxative misuse	–	■	■	■	■	+
Excessive exercise	–	–			–	–
Muscle building					+	■
Assessment-instrument	EDE-Q		EAT-26		EPSI	

Table 5: Shows if the nonbinary participants engaged in "significantly lower frequency" symbolized by a minus (-) or "significantly greater frequency" symbolized by a plus (+) compared to cisgender counterparts, or there being "no significant differences" symbolized by a square (■) between the two groups in terms of the listed disordered eating behaviors.

muscle building). For both studies, no noticeable difference between nonbinary AFAB and nonbinary AMAB was seen.

Gender congruence and ED pathology

Two studies examined whether there was an association between gender congruence (the nonbinary participants' sense of congruence between their gender identity and external appearance) and ED pathology (Cusack et. al., 2020; Mitchell et al., 2021). The two studies differ from each other as Cusack et. al. (2020) examined the association explicit, while Mitchell et al. (2021) examined the association implicit through a hypothesis that consisted of more elements than just gender congruence and ED pathology. Cusack et. al. (2020), who examined gender congruence using 17 items from the gender congruence cluster constituted by four factors (genitalia, chest, other secondary sex characteristics, and social role recognition) from GCLS and ED pathology using EDE-Q, found that gender congruence did not predict ED pathology ($p = 0.439$). The examined hypothesis by Mitchell et al. (2021) was as follows: Misgendering frequency leads to less transgender congruence, which then leads to body dissatisfaction, which then leads to engaging in dietary restraint. Mitchell et al. (2021) named this hypothesis the Misgendering-Congruence Process. Transgender congruence was examined using TCL, body dissatisfaction was examined using BPSS-R and dietary restraint was examined using the EDE-Q subscale Restraint. Mitchell et al. (2021) found that the Misgendering-Congruence Process significantly predicted body dissatisfaction, but not dietary restraint in the nonbinary respondents. However, the direct effect of misgendering frequency with transgender congruence was non-significant.

Finally, it should be mentioned in this section that Cusack et. al. (2020), in addition to examining whether gender congruence is a predictor of ED pathology, also examined whether body image and body checking behavior are predictors of ED pathology. Cusack et. al. (2020) examined body image using BAS. Body checking behavior was examined using BCQ. Cusack et. al. (2020) found that body image did not predict ED pathology. In terms of body checking behavior, Cusack et. al. (2020) found that this behavior did predict ED pathology.

Comparison groups

In the foregoing, the focus has been on comparisons between nonbinary and cisgender individuals, as this is the area of interest in this systematic review. However, it should be noted that some of the included studies also had other types of comparison groups (e.g., a group of transgender males, transgender females and/or a group of individuals with another gender identity) or only had comparison groups different from groups of cisgenders.

Discussion

The aim of this systematic review was to review the existing peer reviewed literature on the prevalence of ED pathology in individuals with nonbinary gender identities as well as the peer reviewed literature on ED symptoms in nonbinary individuals. Overall, this systematic review found mixed results regarding whether nonbinary individuals exhibit more ED pathology than cisgender individuals. However, an overall picture seems to emerge. The studies comparing nonbinary individuals as a unified group with cisgender females and cisgender males, respectively, mainly found that nonbinary individuals (in some cases) only

exhibited more ED pathology than cisgender males, while studies comparing AFAB and AMAB with cisgender females and cisgender males, respectively, found that all nonbinary individuals mainly showed more ED pathology.

This illustrates that some nonbinary individuals exhibit more ED pathology than cisgender individuals, which could be reason enough to pay extra attention to this group of individuals, because EDs are serious and have a better outcome if detected early. This idea also seems to be supported by a recent systematic literature review including 94 studies from year 2000 to year 2018 that investigated the average lifetime ED rates among men and women in the general population (Galmiche, Déchelotte, Lambert & Tavolacci, 2019). This study found an average lifetime ED rate of 2.2% in men and of 8.4% in women, which is clearly lower than the rate of ED pathology found ranging from 14.43% to 38.01% (Lipson et al., 2019; Romano & Lipson, 2021) in nonbinary individuals in this systematic review. In the context of these findings, it should be noted that the included studies appear to find unusually high prevalence rates for the cisgender groups. For cisgender females, the prevalence in the included studies ranges from 11.12-36.7% (Lipson et al., 2019; Arikawa et al., 2021), while it ranges from 4.77-18.2% for cisgender males (Lipson et al.,2019; Arikawa et al., 2021), with the study by Arkawa et al (2021) finding the highest prevalence. One possible explanation as to why Arkawa et al (2021) found such high ED prevalence for cisgenders could be their use of a cutoff score for EDE-Q of ≥ 2.8 rather than the more traditional cutoff score ≥ 4 indicating clinical severity (Carter, Stewart & Fairburn, 2001; Mond, Hay, Rodgers, Owen & Beumont, 2004).

Regarding the fact that some nonbinary exhibit more ED pathology than cisgender individuals, it is relevant trying to understand why some nonbinary individuals develop an ED, as it may illustrate how best to help these individuals. Nonbinary individuals identify with neither the male nor the female sex (Hastings, Bobb, Wolfe, Amaro Jimenez & Amand, 2021) and thus presumably do not want to be reminded of their biological sex through body shapes and physiological functions. In this context, there is a probability that some nonbinary individuals develop ED behavior because of dissatisfaction with the body's biological and physiological gender expressions and hence lack of gender congruency, which is also pointed out by some of the included studies (Mitchell et al., 2021; Nagata et al., 2020; Roberts et al., 2020). ED behavior, such as compensatory behaviors (e.g., laxative misuse or vomiting), food restriction, and excessive exercise have the capacity to inhibit the development of gender characteristics (breast tissue becomes inhibited, menstruation ceases, pubertal masculinization becomes inhibited) and can thereby contribute to the individual's desired gender expression (Coelho et al., 2019). In this context, it makes sense that Robert et al. (2021) found that nonbinary AFAB engaged significantly more in dietary restraint and muscle building than cisgender females and that nonbinary AMAB engaged significantly more in laxative misuse than cisgender males. Moreover, it makes sense that Nagata et al. (2020) found that individuals with a gender expansive identity scored significantly higher on EDE SC compared to both cisgender females and cisgender males. Thus, if a young

nonbinary individual exhibits ED symptoms, it may be worthwhile to bring pubertal suppression into play (Coelho et al., 2019; Hastings et al., 2021) or in the case with a nonbinary individual that has gone through puberty, and has developed biological forms, to propose hormone therapy or surgery (Coelho et al., 2019; Hastings et al., 2021), as these initiatives are likely to reduce the individual's ED symptoms (Coelho et al., 2019). However, the one study examining the explicit association between gender congruence and ED pathology in nonbinary individuals shows that there is no association, which is thus not comparable to the above (Cusack et. al., 2020).

Another possible cause for the development of an ED may be negative reactions (such as prejudice, discrimination, victimization, incomprehension, family rejection) from the environment in relation to the individual´s identification with a nonbinary gender identity, which is also mentioned by some of the included studies (Cusack & Galupo., 2020; Lipson et al., 2019; Mitchell et al., 2021; Nagata et al., 2020). This possible cause has been termed the Gender Minority Stress Theory. However, it should be noted that the theory is not specifically aimed at EDs but rather states that gender minority individuals may be exposed to unique stressors, such as discrimination, which can lead to increased mental health problems (Hendricks & Testa, 2012).

Moreover, a thing deserving discussion is the fact that two of the included studies compared nonbinary AFAB with cisgender females and nonbinary AMAB with cisgender males, while the other two included studies compared only one group of nonbinary individuals with a group of cisgender females and cisgender males, respectively. Is one basis of comparison better than the other, and can the two different bases of comparison have an influence on why the two study groups have different outcomes? Nonbinary individuals identify neither as female nor as male and therefore probably do not find it relevant or pleasant to be grouped as AFAB or AMAB as done by Lipson et al. (2019) and Roberts et al. (2021), why grouping the nonbinary individuals as a single group as done by Nagata et al. (2020) and Arikawa et al. (2021) may be more favorable. Furthermore, in consideration of the nonbinary individuals' feelings, as Nagata et al. (2020) and Arikawa et al. (2021) compared the group of nonbinary individuals with both a group of cisgender females and cisgender males, the two studies do not define which of the two groups of cisgenders that is the more correct one to compare with, which Lipson et al. (2019) and Roberts et al. (2021) do by comparing nonbinary AFAB with cisgender females and nonbinary AMAB with cisgender males. Though, there is a likelihood that some individuals in the group of nonbinary AFAB may feel a greater attachment to the male sex than the female sex despite their nonbinary identity and vice versa with nonbinary AMAB.

However, there are genetic differences between the sex of females and males in relation to the risk of developing an ED (Culbert, Sisk, & Klump, 2021), why the comparative basis by Lipson et al. (2019) and Roberts et al. (2021) genetically is more preferable than the combined group of nonbinary individuals in Nagata et al. (2020) and Arikawa et al. (2021). By mixing nonbinary AFAB and nonbinary AMAB, Nagata et al. (2020) and Arikawa et al. (2021) risk diluting the different results when it comes

to the comparisons of the nonbinary group with cisgender females, as males genetically have a lower risk of developing EDs than females (Culbert, Sisk, & Klump, 2021). Conversely, there is a risk that the results concerning the comparisons between the nonbinary group and cisgender men have been amplified. Thus, one possible reason why Nagata et al. (2020) and Arikawa et al. (2021) differ in terms of some results from Lipson et al. (2019) and Roberts et al. (2021) may be due to their comparative basis. Nevertheless, it should be noted that when comparing the reported figures for nonbinary AFAB and nonbinary AMAB from Nagata et al. (2020) and Roberts et al. (2021), no noticeable differences are seen, and that Nagata et al. (2020) in this relation state that it is possible, contrary to cisgenders, that sex assigned at birth is not associated with differences in risk of EDs when it comes to nonbinary individuals. Thereby, Nagata et al. (2020) can be said to question the basis for the aforementioned differentiation of nonbinary individuals in AFAB and AMAB.

Obviously, the field of what is the right basis for comparison is very complex, as many conflicting factors come into play. Should the emphasis be on the genetic if indeed future research finds that sex assigned at birth plays a role, or on taking the nonbinary individuals' preferences into account? Perhaps a compromise for now could be to differentiate between nonbinary AFAB and nonbinary AMAB, but to compare the group of nonbinary AFAB with both cisgender females and cisgender males, and likewise for nonbinary AMAB.

Lastly, it should be noted that a possible reason why this systematic review found a more unclear tendency regarding nonbinary individuals and ED symptomatology than what the systematic review by Jones, Haycraft, Murjan & Arcelus (2016) found regarding transgender individuals, may be due to the nonbinary term being broader than the transgender term (Strang et al., 2016). Within the nonbinary population, as Mitchell et al. (2021) mention, some nonbinary individuals feel more in line with their assigned sex at birth than others and therefore are unlikely to engage in disordered eating behaviors as much as those who are more in conflict with their assigned sex at birth. Contrary, within the transgender population, it is possible that they as a uniform group are more likely to engage in disordered eating behavior, because the majority of these individuals are in incongruence with their assigned sex at birth. Thus, the present systematic review findings may be due to the fact that some of the studies have an overrepresentation of individuals who are somewhat consistent with their assigned sex at birth, while other studies have an overrepresentation of nonbinary individuals who are inconsistent with their assigned sex at birth. Conversely, the reason why the systematic review on transgender people finds a clearer trend probably lies in the fact that this is a more homogeneous group. Future research in the field of nonbinary individuals should, because of the above, differentiate between the different nonbinary gender identities, so that potential differences between nonbinary gender identities are not obscured.

Limitations

This article includes the first synthesis of the existing literature on the prevalence of EDs in individuals with a nonbinary gender identity, which makes this systematic review particularly valuable. However, some important limitations of this systematic review

should be mentioned as these may have an impact on the findings.

The two main limitations are the limited research in this area, as a small number of studies make it difficult to conclude anything definitive, and the fact that the included studies vary widely in terms of the methodology used to assess ED pathology, as this makes the comparison across the studies less reliable and thereby may affect the overall conclusion of this systematic review. However, it is favorable that most of the included studies used valid ED assessment instruments. Nevertheless, the fact that only half of the included studies contained a comparison group, and the fact that only a few investigated exactly the same area, are limitations, as this makes it even more difficult to draw any definitive conclusions from the present review. Lastly, it should be mentioned that no quality assessment of the included studies was made, which is disadvantageous as a quality assessment could potentially affect the interpretation of the data and thus the conclusion.

Conclusion

The results of this study indicate no clear tendencies on the prevalence of ED pathology and ED symptoms in individuals with a nonbinary gender identity compared to cisgender individuals. However, the fact that some of the included studies found that nonbinary individuals exhibit more ED pathology than cisgender individuals seems to justify paying extra attention to this population, taking into account the severity of EDs and how important early detection and treatment is regarding the prognosis. Lastly, the mixed results illustrate the importance and need of increased research in this field, especially with the use of similar methodology, as this will likely clarify the degree of attention that should be paid to this group.

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7. Diskussion

Det primære formål med et systematisk review er at facilitere en beslutningsproces baseret på den bedst tilgængelige evidens (Perestelo-Pérez, 2013). En korrekt facilitering af en sådan beslutningsproces kræver, at det systematiske review følger udarbejdede retningslinjer for udførelse af et systematisk review, såsom the PRISMA guidelines, da disse blandt andet har til formål at reducere chancerne for misledende konklusioner (Perestelo-Pérez, 2013; Garg, Hackam & Tonelli, 2008). Navngives et studie som værende et systematisk review, men uden at der følges nogle retningslinjer, er der ingen garanti for at gennemgangen er rapporteret og udført med den fornødne stringens, hvormed det kan betvivles, om reviewets konklusion(er) reelt er i stand til være en facilitator for den mest korrekte beslutning (Perestelo-Pérez, 2013; Garg, Hackam & Tonelli, 2008). Dette systematiske review følger PRISMA guidelines så vidt muligt, hvorfor der kan argumenteres for, at den givne konklusion reelt kan fungere som et betydningsfuldt redskab for sundhedspersonale til at træffe den mest korrekte beslutning uden selv at investere ressourcer og tid (Perestelo-Pérez, 2013).

På grund af tidsmangel indeholder dette systematiske review dog ikke en kvalitetssikring af de inkluderede studier, hvilket må anses som en svaghed ved reviewet. Gennem en kvalitetssikring belyses validiteten af de individuelle studier, validiteten af bestemte design karakteristika samt anvendeligheden af det systematiske reviews resultater (Perestelo-Pérez, 2013). Manglen herpå kan således potentielt udgøre en risiko for fejltolkning af resultaterne og dermed bevirke en misvisende konklusion (Perestelo-Pérez, 2013). En kvalitetssikring af resultaterne er et værdifuldt og betydningsfuldt element af PRISMA guidelines, som man bør stræbe efter at leve op til, hvorfor en kvalitetssikring af de inkluderede studier vil blive udarbejdet, inden udgivelse af dette systematiske review. Trods den nuværende mangel af et formelt kvalitetssikringsinstrument, såsom *the Joanna Briggs Institute Critical Appraisal Checklist for Analytical Cross-Sectional Studies* (Joanna Briggs Institute, 2007), som ville være oplagt at anvende i dette systematiske review grundet dets fokus på tværsnitsstudier, er det vigtigt at påpege, at jeg i dette review har forholdt mig til studiernes metodologiske karakteristika i artikels tabel 1 samt omtalt mulige begrænsninger i artiklen.

Foruden at PRISMA guidelines har været grundlæggende i forhold til at reducere misledende konklusioner, har brugen af PRISMA guidelines også været fundamentalt i forhold til at udarbejde en så gennemsigtigt, reproducerbar og systematisk gennemgang som muligt, hvilket også må anses som en styrke ved indeværende review. En sådan gennemgang medfører nemlig flere ønskede effekter, idet den giver modtageren mulighed for selv at vurdere de udvalgte metoder og kriteriers egnethed samt vurdere for potentielle bias og dermed muligheden for at bedømme den samlede kvalitet og troværdighed af det systematiske review og dets konklusion (Garg, Hackam & Tonelli, 2008; page et al., 2021). Garg, Hackam & Tonelli (2008) omtaler dog, at et systematisk review, på trods af en transparent gennemgang, godt kan indeholde bias, hvis selektionen eller fremhævelsen af visse af de inkluderede studier er påvirket af forudfattede meninger af forfatterne eller af forudfattede meninger af finansieringskilderne. Da det undersøgte felt er meget nyt og begrænset, havde jeg ikke nogen forudfattede meninger, og derfor blev nogle studier ikke prioriteret frem for andre. Jeg havde ej heller nogen finansieringskilder, hvorfor dette systematiske review ikke påvirkes af de to nævnte bias.

I relation til at det undersøgte felt er meget begrænset samt at indeværende systematiske review ikke finder nogle klare tendenser, kan det diskuteres, om det havde været mere fordelagtigt at udarbejde et individuelt studie, da et sådan studie, i modsætning til et systematisk review, ville bidrage med yderligere viden til den nuværende videnspulje. Endvidere ville et sådant studie på sigt, sammen med den eksisterende og fremtidige forskning, også kunne bidrage til, at et fremtidigt systematisk review ville have større sandsynlighed for at finde nogle klare tendenser. Enkeltstudier placerer sig dog lavere i evidenspyramiden end systematiske review og er i højere risiko for falsk-positive resultater, hvilket medfører større risiko for at lede til anbefalinger, der ikke er i individets bedste interesse (Pandis, 2011). Dermed er udarbejdelsen af dette systematiske review, på trods af den begrænsede mængde forskning, alligevel at foretrække. I denne forbindelse skal det nævnes, at der i dette systematiske review kun er anvendt tre databaser, hvilket er minimumskravet if. Perestelo-Pérez (2013), hvorfor inddragelsen af flere databaser formentlig havde have været fordelagtigt i forhold til at indfange flere relevante studier.

I tillæg til et systematisk review er det ofte oplagt at overveje udførelse af en meta-analyse (Ryan R, 2016). En meta-analyse kan nemlig, som følge af dens statiske metoder, kombinere data fra næsten identiske studier med tilstrækkelige ens udkom og dermed opnå et mere præcist estimat af den sande effekt, end der kan opnås ved individuelle studier. Altså kan man ved kombinering af stikprøverne fra de individuelle studier forøge størrelsen af den "overordnede stikprøve", hvormed statistisk power af analysen forøges, samtidig med at størrelsen af konfidensintervallet for punktestimatet af effekten reduceres (Garg, Hackam & Tonelli, 2008; Ryan R, 2016). Indeværende systematiske review indebærer ingen meta-analyse på grund af tidsmangel. Det kan dog diskuteres, om en sådan analyse overhovedet ville have være meningsfuld og relevant. Teknisk kræver udførelsen af en meta-analyse kun to studier, der rapporterer på samme udkom, forudsat at disse to studier kan sammenlægges meningsfuldt og forudsat at studiernes resultater er tilstrækkelige ens (Ryan R, 2016). Tre studier i indeværende review rapporterer en EDE-Q global score (Arikawa et al., 2021; Cusack et. al., 2020; Nagata et al., 2020) og opfylder således kravet om antal og rapportering på samme udkom. I vurderingen af om to studier kan sammenlægges meningsfuld indgår, om de har samme sammenligningsgrupper (Ryan R, 2016). Studiet af Cusack et. al. (2020) indeholder ikke en sammenligningsgruppe, hvorfor dette studie med stor sandsynligvis ville blive sorteret fra ved en potentiel meta-analyse. Kigges der nu kun på Arikawa et al. (2021) og Nagata et al. (2020), gør det sig gældende, at disse har samme sammenligningsgrundlag, men som skrevet i artiklen, ikke finder helt samme resultater. Herudover skal det bemærkes, at begge studier ikke udpensler, hvilke nonbinære kønsidentiteter der indgår i deres stikprøve, hvorfor det er usikkert, om de rent faktisk undersøger præcis den samme population. Konklusionen på denne diskussion må derfor være, at det ikke havde være meningsfuldt at udføre en meta-analyse.

8. Perspektivering

Indeværende systematiske review finder blandede resultater. Det faktum, at nogle studier finder, at nonbinære individer er i højere risiko for udvikling af spiseforstyrrelsespatologi, åbner spørgsmål angående om, hvorvidt nonbinære individer også er i risiko for andre negative mentale tilstande.

Et nyligt review fra 2019 er i denne forbindelse særligt relevant, da dette netop undersøger negative mentale tilstande hos nonbinære og genderqueer (NBGQ) sammenlignet med ciskønnet individer (Scandurra et al., 2019). Scandurra et al. (2019) finder at NBGQ oplever flere negative mentale tilstande end ciskønnede, såsom højere rate af selvmord idedannelse, lavere rate af livstilfredshed og kropstilfredshed. Det skal bemærkes, at dette review også ligger under for begrænset forskning (Scandurra et al., 2019). Kun fem af de inkluderede studier undersøgte forskellen i mentale tilstande mellem NBGQ og ciskønnede, og hertil skal nævnes, at de forskellige mentale tilstande kun berettes hovedsageligt af enkelte studier og ikke er undersøgt af alle fem studier.

Fundene af Scandurra et al. (2019) bliver understøttet af Lipson et al. (2019), et af de inkluderede studier i indeværende systematiske review. Lipson et al. (2019) finder nemlig, at alle tre grupper af gendergueer (alle genderqueer, genderqueer FAB og genderqueer MAB) sammenlignet med deres respektive sammenligningsgruppe (alle ciskønnede, ciskønnede kvinder og ciskønnede mænd) scorer højere på angst symptomer, depressive symptomer, ikke-suicidal selvskade (NSSI), selvmord idedannelse, selvmordsplaner, selvmordsforsøg og ethvert mentalt sundhedsproblem. Arikawa et al. (2021), endnu et af de inkluderede studier, der, foruden at fokusere på spiseforstyrrelse, også fokuserer på depression og angst samt andelen af deltagere, der er på receptpligtig medicin, finder samme tendens som Lipson et al. (2019), hvad angår depression, men ikke hvad angår angst. Arikawa et al. (2021) finder netop, at nonbinære individer scorer en smule lavere end ciskønnede kvinder på angstsymptomer, men højere end ciskønnede mænd. På trods af dette fund finder Arikawa et al. (2021) dog, at andelen af nonbinære, der er på receptpligtig medicin, er højere sammenlignet med både ciskønnede kvinder og mænd, og at de fleste var på antidepressiv og/eller antiangst medicin. Dette understøtter, at man bør være opmærksom på både depressive og angst symptomer i relation til nonbinære individer. Sidst skal nævnes et studie af Strang et al. (2015). Strang et al. (2015) fremlægger nemlig, at flere studier indikerer, at der er en overrepræsentation af unge med samtidig forekomst af autisme spektrum forstyrrelse og en nonbinær kønsidentitet.

Opsummerende indikerer ovenstående, at nonbinære individer er i højere risiko for negative mentale tilstande end ciskønnede individer, og at der er en øget forekomst af nonbinære individer i autismepopulationen. Hvorfor nonbinære synes at være i højere risiko end ciskønnede, når det kommer til negative mentale tilstande, kan ifølge Hendricks & Testa (2012) forstås som værende fæstet i de alarmerende høje rater af vold, afvisning og diskrimination nonbinære individer udsættes for som følge af deres kønsidentitet eller udtryk. Denne konceptualisering, der er en udvidelse af Meyer´s (2003) Minoritet Stres Model (Hendricks & Testa., 2012), vedkender både Lipson et al. (2019) og Scandurra et al. (2019). Hvorfor studier finder, at unge med autisme spektrumforstyrrelse er mere tilbøjelige til at identificere sig som værende nonbinære sammenlignet med unge uden autismespektrum forstyrrelse, kan muligvis forklares ved afvisning af den binære-ciskønnede norm samt autister mindre tilbøjelighed til at bekymre sig for de typiske sociale normer (Walsh, Krabbendam, Dewinter & Begeer, 2018).

Forskningsfeltet indenfor mentale tilstande er, ligesom feltet inden for spiseforstyrrelse, begrænset, hvorfor der er behov for mere forskning (Scandurra et al., 2019). Trods at mere forskning er nødvendigt, synes det alligevel relevant allerede nu i arbejdet med nonbinære individer, ifølge undertegnede, at være opmærksomme på mulige nævnte associationer, hvilket leder frem til endnu et spørgsmål: Hvordan tager man på bedste vis hånd om ovenstående mulige associationer?

9. Samet konklusion

Dette speciale har haft til formål at undersøge problemformuleringen: Hvilken prævalens er der af spiseforstyrrelsespatologi samt hvilken tilstedeværelse er der af spiseforstyrrelsessymptomer blandt individer med en nonbinær kønsidentitet i den publicerede peer-reviewed litteratur? Den bedste metode hertil blev vurderet at være et systematisk review. Otte studier opfyldte inklusionskriterierne. På baggrund af en systematisk gennemgang af studierne, kan det konkluderes, at den nuværende forskning hverken indikerer nogen klare tendenser angående prævalensen af overordnet spiseforstyrrelsespatologi eller angående tilstedeværelsen af spiseforstyrrelsessymptomer.

Flere mulige årsager kan ligge til grund for at forskningen ikke er mere entydig. En mulig årsag antages at være brugen af forskellige sammenligningsgrundlag, idet de studier, der samler alle nonbinære i én gruppe, overordnet finder, at nonbinære individer kun udviser mere spiseforstyrrelsespatologi end ciskønnede mænd, mens de studier, der differentierer mellem nonbinære AFAB og nonbinære AMAB, til gengæld overordnet finder, at begge grupper udviser mere spiseforstyrrelsespatologi sammenlignet med henholdsvis ciskønnede kvinder og ciskønnede mænd. En anden mulig årsag er studiernes manglende angivelse af de nonbinære kønsidentiteter, de undersøger, da det er muligt, at nogle af studierne er overrepræsenterede af nonbinære individer, der i nogen grad er i overensstemmelse med deres tildelte køn ved fødslen, mens andre studier er underrepræsenterede heraf, og derfor finder en højere grad af spiseforstyrrelsespatologi. Herudover anses den begrænsede forskning på området som værende en særlig betydningsfuld årsag. Mere forskning på området ville sandsynligvis føre til en større entydighed. I relation hertil vil udarbejdelse af flere studier endvidere kunne afklare, hvilken af de ovenstående mulige tendenser der reelt er repræsentative for den nonbinære population. I sidste ende vil en større mængde studier eventuelt muliggøre udfærdiggørelse af en meta-analyse, som vil kunne give et mere præcist estimat af den sande effekt. Til sidst vurderes det, at brugen af forskellige assessment instrumenter har påvirket dette systematiske review, idet studierne ikke undersøger nøjagtigt det samme, når de anvender forskellige assessment instrumenter og herved kan forskellige resultater opstå.

På trods af at ingen klare tendenser er fundet, må det alligevel retfærdiggøres, at nonbinære individer får mere opmærksomhed fremadrettet, idet enkelte studier finder, at nonbinære udviser mere spiseforstyrrelsespatologi end ciskønnede. Nødvendigheden heraf underbygges, når man tager alvorligheden af spiseforstyrrelser i betragtning. Ydermere illustrerer perspektiveringen i kappen, at nonbinære individer er i større risiko for at udvikle negative mentale tilstande, hvorfor øget opmærksomhed virker essentiel.

Afslutningsvis konkluderes det således, at forskningen inde for den nonbinære population er kompleks og endnu i sin spæde begyndelse. Mere forskning, hvor de

samme metoder anvendes, er altså nødvendig for at klarlægge i hvor høj grad opmærksomhed skal tilrettes nonbinære individer.

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