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Triple X superwomen: their post-compulsory education and employability

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ABSTRACT

The further and higher educational experiences and consequent employability of women with the under-researched Triple X syndrome are arguably unknown. This research study examines their special educational needs (where relevant), and their negotiation of conventional educative systems, throughout the stages of post-compulsory education and into the world of work. The prevalent individualist societal focus means that education bodies promote their qualification offers for students to gain individual employability currency, in order to secure their own futures. Ten women with Triple X were asked to reflect on their post-compulsory education experiences, considering their varying developmental and cultural barriers to access, and their employability skill set against the background of the likelihood of their transferring this to a position of graduate employment. Findings illustrate the significance of socio-economic background and support network, as well as varying individual cognitive capacity and also health status in participants being able to varying degrees, to secure a sense of stability and contentment: yet no woman secured graduate employment. By way of a further conclusion this research discloses the systemic lack of awareness of the existence of Triple X on the part of educational bodies and employers, a problem which further research is needed to address.

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Introduction

Experience of post-compulsory education, and resultant employability brings academic stimulation, and the potential securing of one's future life path; however it also brings certain inherent pressures on students. This research attempts to assess the educational and employment chances of a group of adults with a little known and under-researched genetic condition, 'Karyotype 47, XXX', otherwise known as 'Triple X'. Jacobs et al. (1959, 423) first identified this: 'This present report concerns a sex-chromosome anomaly – namely, the "super-female", characterised by a chromosomal number of 47 and a chromosomal sex of XXX'. The people affected are exclusively female, and in this case study in Wales and England, are all adults. Having Triple X means that students could have varying types of special educational need (SEN) and/or other aspects of poor health; 'Triple X' appears to be an 'umbrella' for a range of traits. The research derives in part from the author's family circumstances (see Attfield 2020). The research is informed by a sociology of education perspective, in relation primarily to special educational needs, but also to generic education, either traditional academic, or modern vocational, and post-compulsory education level students tackling mainstream educational institutions.

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Popkewitz (2012, 183) asserts that ‘the production of human kinds in school entails a simultaneous process of exclusion and abjection embodied in the impulse for inclusion’: it is on one of those excluded types that this article concentrates. Popkewitz (2012, 174) discusses ‘schemes for remediation and paths for rectification set up to remake the child who is recognised as different’. But who are these different children? The individuals of focus here, that is women with Triple X, require a holistic, reflective exploration into their developmental experiences and family relationships in order to understand why they are unlikely to fit the ‘normal’ path of education through neither effectively ‘consuming’ preparation for the knowledge economy nor holding a subsequent position in economic society. In fact educational policy and its performance indicators involve recorded information on students and their attainment, as well as individual information relating to their family and background (Popkewitz 2012), even if an identification of ‘Triple X’ is disregarded by educational data analysts (Attfield 2020). The health of women with Triple X is examined first.

The developmental issues of women with Triple X

Otter, Schrandner-Stumpel, and Curfs (2010) found that young women were disproportionately tall, especially compared with their weight. They were generally found to have poor balance and reduced coordination, and a quarter experienced ‘functional abdominal pain’. Of 33 women in another study, half experienced forward (thoracic) curvature of the spine, and five had scoliosis, the sideways curvature of the spine (Stagi et al. 2016). Kodandapani et al. (2011) stated that following early puberty, young women may then be susceptible to premature ovarian ageing, leading to the onset of early menopause. Triple X young women may also be susceptible to seizures, kidney problems, low muscle tone and chronic fatigue (Stagi et al. 2016). A minority of participants had been referred to mental health services for psychotic symptoms, and specifically for personality disorders, bi-polar disorder, anxiety and depression (Walzer 1985).

Otter, Schrandner-Stumpel, and Curfs (2010) reported that alongside their prominent medical issues, with regard to IQ ‘intelligence’, most young women with Triple X were lower in the typical bracket of ‘normal’. Walzer (1985) documented Triple X young women as possibly having auditory processing and auditory memory issues, restricted verbalising skills, and limited reading and spelling capacities; these are somewhat represented by dyslexic tendencies (Dobson 2019). Some or all of these issues can affect their functional capacities to develop and perform in education, to progress alongside peers, and to attend school as much as is expected. Limited social interaction skills, sensitivity and anxiety, and attributes of autism spectrum disorder (Cai and Richdale 2016), add to pressure on such young women to be a ‘typical’ student: ‘presumed “deviations” from a preconceived and sacred notion of ability/normalcy have been pathologised and medicalised, thereby leading to the subversion of disabled people’s (including young women with Triple Xs’) subject positions’ (Liasidou 2010, 226).

The path of further education

Education qualifications in further education are largely academic. Equivalent qualifications are varying types of apprenticeship, or vocational qualifications (UCAS 2014). Young (2014, 13) refers to the UK 1997 ‘Dearing Report’, and the types of further education that were pigeon-holed according to perceived ability: ‘Slower-learning students will be forced towards the broad vocational track ... (and) academic education is only available for the elite’. This is due to an implicit hierarchy where the traditional advancement of academic knowledge retains credibility over newer, college and work based, vocational training (Kahyarara and Teal 2008; Taylor, Lehman, and Raykov 2015). Young states that in contrast, European and South East Asian countries work according to a more cohesive and reformist structure in developing human educational capacity at further education level.

The socio-economic position of one's family could affect educational opportunity for young women with Triple X. hooks (2010) argues that education acts as a filter which either enables or restricts, depending on the extent of one's cultural status. Academic learning purportedly occurs alongside a 'hidden' training in conformity and participation in normative channels. This forms a part of people's cultural capital, that is, desirable knowledge, symbols and status; education is one defining aspect of cultural acceptance (Bourdieu 1990). Cultures are manufactured, so that certain identities will have access to study, whilst others will not. If not, and individuals are 'unsuccessful' in school, they will become socially defective (Delamont 2001). The Council Of The European Union (2010) advise that vocational further education of a high quality can challenge student socio-economic disadvantage, as well as the exclusion of those with SEN, and that it can teach global scale innovation, and a broad social conscience.

Higher education opportunities

In terms of the purpose of attending a higher education institution, Bowers-Brown, Ingram, and Burke (2019, 208) discuss the notion that 'going to university affords a legitimacy and a moral worthiness for individuals in the eyes of others,' and also that higher education is considered to be a catalyst for employability. Williams et al. (2016) discuss 'human capital theory' which is the notion that individuals are 'capital goods' in the knowledge economy; higher education is the vehicle with which participants can excel in the labour market. Holborow (2018, 523) argues that the 'knowledge' benefits of higher education, not to be 'enquiry, enlightenment or notions of citizenship ... (but those of) specific marketable skills which serve direct economic purposes'. That is, those of commercial awareness, leadership, digital literacy, and 'professionalism'. Human capital theory explains that, on average, the university graduate gains proportionately in income to reflect their accomplishment and potential (Osmani et al. 2017; Marks 2017).

University students with SEN may be observed to have an 'aspiration deficit' and thereby be less likely to succeed; however this may be due to their internalising of the SEN deficit system (Armstrong 2012). Dyslexia recognition is a prominent part of SEN support in higher education. Some institutions treat dyslexia as a ' "specific learning preference" (and facilitate) adaptations to the way teaching is delivered and how the presentation of learning material is constructed', although this is not standardised (Dobson 2019, 1183). Another example of SEN support relates to students with autism spectrum disorder: Cai and Richdale (2016, 31) found in higher education that 'most students felt educationally but not socially supported (and that) many parents provided substantial student support'. Higher education mental health services remain inconsistent and limited, reflecting a systemic lack of mental health and well-being knowledge; Di Placito De Rango (2016) proposes designated teams to challenge typecasts, and to create policies based on new-found mental health knowledge. Characteristics of dyslexia, autism spectrum and mental health issues indicate the varying nature of Triple X in particular relation to their SEN (although not all such attributes may necessarily affect all Triple X women). This apparent connection to student support services must be coincidental, as no student support services are likely to have knowledge of Triple X.

Employability and the securing of employment

An aspect less addressed in the literature is the employment prospects of young adults with SEN (Tomlinson 2017); the employability and aspiration of young women with Triple X does not seem to be addressed at all. The transitional skills of employability require a foundational understanding of paid employment, vocation ideas, beginner job related proficiencies, and a growing competence within the chosen work area. Some of this is dependent upon securing such initial knowledge whilst still at school and developing 'future employment goals' (Bowers-Brown, Ingram, and Burke 2019). According to the ideals of a 'meritocracy' and 'equal opportunities' (Attfield and Attfield 2019), education is the pivotal key to upward mobility, so that the focus is on schools and universities to

validate their purpose, and to confirm such social ideals. The notion of meritocracy depends upon each person's ambition and ability to secure work, and is thereby individualist. So achievement in the world of work is dependent upon individuals' own 'sense of agency', usually directed by their material advantage (hooks 2010); a sense of entitlement could equate to privilege afforded to a minority of students, and related recurring expectations. This societal individualism diverts attention from structural inequities of access and provision, which impact on educational aims of aspiration (Tomlinson 2017).

Structural inequities affecting life-chances correspond to the differential treatment of powerless groups with socio-economic differences, as well as minority social identities of for example ethnicity, disability, health, gender and LGBT+ status (hooks 2010). Another minority identity is that of those with SEN and their consequent educational and employment chances. Tomlinson (2017) suggests that school leavers with SEN tend to secure basic vocational qualifications, jobs requiring low-level skills, casual employment or non-employment, and that they have significant vulnerability or are even known to the criminal justice system. There is little research that links educational experience and qualification outcomes of those with SEN to ultimate employment (Bowers-Brown, Ingram, and Burke 2019), so that little is known as to what extent for example those who gain degrees subsequently work in their qualified field. Global examples of the various educational stages of post-compulsory education have been assessed above, as has employability, a context in which a young woman with SEN (presumably including Triple X women) accepts some sense of membership in the community in terms of achieving a label of 'worker', or else an alternative to this.

In order to report on the structural inequalities found in the labour market, it is important to include in this analysis an holistic account of the women that comprise this sample, including understanding their SEN within their class and family context. It is only by acknowledging these dynamics that we can comprehend their labour market outcomes.

Methods

Theoretical basis

The research design is led by the sociological qualitative methodologies of interactionism and postmodernism. Here, the former relates to an individual and local basis, and the latter to a systemic one. Interactionism can address the possible different proficiencies of women with Triple X in their social interaction with others (Wigby et al. 2016). Interactionists hold that individuals interact with people within their surroundings, and in turn further understand their social world (Fine 2001). Postmodernism on the other hand, directs the researcher to identify the culturally embedded values and norms of an evidence-base, and to question certain objectivised 'knowledge' (Lyon 2000). Examples are that SEN fits into the category of 'exceptionality' and outside of 'normal' by established institutions, and 'unknown' classifications are rejected entirely (Farrell 2010). Both methodologies invite commentary as to why some women with Triple X are expected to achieve more than others, externally to their individual capacity.

Ethics, sample and interview

University ethical approval was secured before sending a participant recruitment advert to two gatekeeper organisations in England and Wales, UK. The opt-in process ensured that case study participants elected to take part. Amongst ethical considerations of confidentiality, consent and regard, the safeguarding of both participant and researcher was also key. Ten women formed the sample and were subsequently interviewed in their own regional areas, where to meet being decided by mutual agreement. Interviews ranged from one to two hours, and were orally recorded and later transcribed. Interview questions generated self-disclosure and conversation about experiences, seeking to throw light on an unresearched area. Participants reflected upon their educational

encounters, and the readiness of their institutions to make provision for particular additional needs, as well as their expectations of links between education and employment. The author's family interest in this unresearched area (see Attfield 2020) informed the direction; a way to begin to address the gap in the literature is to involve women with Triple X themselves as the central focus. Methodological analysis requires rigorous scrutiny and a search for bias. It requires reflexivity, the self-assessment of one's subjective role as researcher, from initial research design, to the co-production of data, and accountable analysis. Following article completion, all ten participants validated their data, thus strengthening the research rigour and credibility (Bryman 2012).

Diversity

The balanced diversity of participants can clearly not be planned; however diverse identities are observed. Of the ten participants, seven were white British, and three had dual nationalities. Eight participants reported being heterosexual, and two bi-sexual. Two women are bi-lingual; their other languages are Welsh, and Turkish. One participant is a wheelchair user, and another is a parent. Participants ranged from ages 20 to 48, and in terms of socio-economic position, four stated being less privileged, and six more affluent. Those exposed to a higher cultural capital may be more likely to choose to participate in research; however this cannot be predicted, and participants are seen as interesting in their own right (Bryman 2012). In order to avoid identifiability, participants are individually referred to by their allocated category which represents the extent of their (to date) educational achievement, of either UK further education (FE), or higher education (HE). Themes are addressed according to patterns and differences found in the data, which are discussed below.

Results

Themes are participants' backgrounds, including their class and familial support network, the point at which women found out that they have Triple X, their overall wellbeing, their educational experiences, their subsequent employability, and their reflections. Social class appears to have made a tangible difference to participants throughout their lives. Otter, Schrandner-Stumpel, and Curfs (2010, 268) discuss a study that found 'higher socio-economic status predict(ed) a higher level of functioning.' Here, within the two categories of FE and HE, participants' self-identities of class are split evenly across both. (FE) with a working-class identity said:

I try to be in control of my life, but sometimes it don't work. It's hard saving money. I get paid and I give half of it to mum, it's to pay back what I've borrowed off her.

In absolute contrast (FE) with a middle-class identity acknowledged: 'My parents have bailed me out a lot with money'. Similarly, (HE) with a middle-class identity stated: 'I have a higher IQ family, and money to support me'. Two participants who fall outside of conventional class labels include (HE), where her family are working class, but said: 'I'm not in the class they're in. As a disabled person, I'm at the bottom of society'. McQuigge (2017, 1) similarly states 'The unemployed respondents overwhelmingly said they were out of work as a direct result of their disability'. The classification of 'disabled full time' could apply here to an 'under-class'.

In terms of participants' impressions of overall support network, this appears to differ across the extent of family or partner connection. Wigby et al. (2016) found that young women with Triple X required disproportionate levels of support from parents, as opposed to their siblings. This may be reflected in some cases here. Six participants live at home. One (FE) commented: 'My mum and dad, grandparents and my siblings all look out for me'. One participant highlighted a close parental connection: (FE) 'My mum is my best friend'. Three women live with their spouse, and two of these have family contact to differing extents. One (FE) has a less proactive relationship with her own family: 'I'm married, we do everything together. Neither of us really do friends, and we have phone contact with our families ... '. Another participant (FE) lives with her mother, but is not able to be

open: 'She wants me to talk to her, but I'm quiet. I can't say stuff'. One participant (HE) has severed family ties, and lives with her spouse: 'I have no relationship with any of my family. I really needed emotion and love, but they haven't got that'. While one participant is close to her mother in particular, (HE) observes her father's distance, 'when I talk to him, he looks at his watch!' No participants live isolated from all familial or partner ties (see Amati, Rivellini and Zaccarin 2015).

Otter, Schrander-Stumpel, and Curfs (2010) reported from studies that a third of young women with Triple X demonstrated behavioural issues, they struggled with familial and partner relationships, and a heightened sensitivity led to a stronger sense of stress. Participants here talked about individual relationships with siblings during their childhood and into adulthood. (HE) said: 'My sister was very academically bright and utterly intolerant of me'. In absolute contrast, (HE) was overbearing towards *her* sister, due perhaps to the same contrast of ability amongst siblings: 'I used to bully my older sister when we were little. She just breezed through life, and I was so jealous'. Another participant (HE) acknowledged a sense of responsibility for their discord: 'My sister and I didn't speak for 9 years. Now we're trying to get to know each other again. I've changed so much, and learned about my syndrome'. A further participant compares her life position to that of her siblings: (FE) 'The way I see it, is my sisters have brains and I don't'.

Receiving the diagnosis

A significant watershed moment occurred in the lives of many women when they found out they had Triple X. The impact differed according to the stage at which they made this discovery, as to how it impacted on their life path (see Wigby et al. 2016). Six participants were told by their parents by the time they were fifteen, and had a chance to gradually understand it: (FE) 'I remember always knowing. They never treated me differently'. Some participants spoke about how an understanding of the diagnosis came after the stage of being informed of it: (FE) 'Mum and Dad didn't want me to go to high school not knowing. But I understood it later on'. Another participant comprehended years afterwards: (FE) 'I can't remember when Mum told me. And I'm like "what's that?" And then I've forgotten, and then I've asked her again, and then I've forgotten again'. One participant (HE)'s parents had not considered when, if ever, they would inform her of her diagnosis: 'Dad told me about my syndrome because he was shocked at my (age 16) GCSE exam results, but Mum was horrified that he'd told me'.

Professionals, not parents, told three participants of their diagnosis due to significant medical incidents. (HE) said: 'my mum got worried I hadn't started having periods. The hospital found Triple X in a blood test. My ovaries never grew at all'. A second participant (FE) explained: 'I was pregnant. I was told the baby wouldn't survive, so I had an amniocentesis to test his chromosomes; his were fine and mine weren't. I had Triple X'. This participant subsequently went on to have four healthy babies. A third woman (HE), stated: 'Eventually I went to my GP. She told me I'd *had* an early menopause at 31, and genetic testing found Triple X.' Kodandapani et al. (2011) discuss a 29-year-old participant who presented at an infertility clinic. Following investigation, premature ovarian ageing was detected, and a blood test gave a diagnosis of Triple X. Of the three participants just mentioned, two women felt that their diagnosis threw significant light on their position in their family. Upon finding out about the Triple X, (HE)'s sister felt the diagnosis vindicated HE herself, but that this had the effect of worsening their relationship: 'My sister felt it explained all my difficulties she had been intolerant of, as if it had justified her bullying!'. The second participant (FE) was reminded of how much she had felt different: 'That was why I was so different to everyone. It had been so hard not knowing why I behaved differently to others'.

Learning capacity and health

Health and wellbeing, and self-ascribed dis/ability are significant areas for participants, impacting on their education and life chances. General patterns formed of: learning delays, mental health, and physiological issues. In terms of learning delay, this manifested itself as slow auditory processing,

short term memory loss, dyslexia traits, and autistic behaviours (Wigby et al. 2016). Nine participants reported having some kind of learning delay: (FE) 'I have to work harder than other people to keep up. It's social cues and you don't know if you get them or not'. Similarly (HE) said: 'I'm always three steps behind. I find it very chaotic, my brain is never quiet'. Two participants described giving up struggling to keep up with others: (FE) 'learning and concentration are difficult for me. I get bored quickly'. Another aspect mentioned by two participants was managing a conversation differently: (HE) 'I miss instructions. I have to fill the blanks in my head and hope it's what people are talking about to me'. And (HE): 'I've got slow processing issues. When someone speaks, I hear "whah, whah, whah", then it'll make sense'. Several participants considered problems with their short term memory (FE) '... I can't remember what I did yesterday'. One participant described how, despite her dyslexia and processing issues, she is cognitively able. (HE) 'I have dyslexia, dyspraxia and dyscalculia. My intelligence is high, but my processing speed is low'.

Participants discussed varying conditions of mental health, and in some cases of significant vulnerability. All participants mentioned experiencing anxiety and stress to some extent. (HE) 'I was excluded at school for fighting age 13. I was introvert and passive, I wasn't good at processing, and anger grew. I certainly felt emotions more intensely than others'. For some, a feeling of instability has continued into adulthood. (HE) 'I used to struggle with my anger; I was almost volcanic. Now I get intense anxiety and panic, and that will bring on migraines.' And (FE): 'Recently me and my mum argued. I started whacking my head against the floor; it felt scary because I lost control'. Another participant has a specific mental health diagnosis: (FE) 'I can't be left on my own too long, because of my depression; I have borderline personality disorder'. Two participants discussed having suicidal thoughts. (HE) 'When I was ten I talked about dying, and I was sent to child mental health services. I've been on medication since fourteen and that's improved everything'. One participant is on anti-psychotic medication, yet her downward feelings are ongoing: (FE) 'I phoned my counsellor to ask if she would authorise me slitting my wrists. She said "No, you're not. You are *not* dying".'

Participants experience a range of significant physiological issues. Nine participants classed themselves as tall. Some participants have multiple medical problems, some of which are seemingly rare. One participant (HE) discussed how her disability is not created by her own characteristics, but by society (see Bunbury 2019):

My life is restricted more by society than by me. I use a wheelchair because of a collapsed lung and organs that don't work; I have a lot of medical interventions; my world is just medical.

A second participant (HE) reported her hyperhidrosis, resulting in major chest surgery: 'It's excessive sweating syndrome. I couldn't shake anyone's hands, or wear fitted clothes and it increased my social anxiety'. A third participant (FE) reported:

My balance is not great, and I have 'biotremors'; I shake. It's worse with stress. And I have scoliosis – which has caused me back and hip agony for years. But I can't wear my back brace because I have stomach problems.

Many participants described facing chronic fatigue. One participant (HE) has insomnia, and needs day-time sleep in order to take part in any activity. Seven participants reported being bullied at school: (HE) 'There was this rude, vile, nasty group of girls. The school never did anything about bullying'. Some were taken advantage of because of their lack of social skills: (HE) 'I was bullied at high school because I was different; I lacked social understanding and had no friends'. And (FE) 'I don't think I could deal with school. Mum would explain to me that "friends" were using me'. One participant had a unique coping mechanism: (HE) 'I was badly bullied at school. During that time I stopped thinking in the first person, so it was happening to "her", and I avoided saying "I" at all'.

Educational experiences

Otter, Schrandner-Stumpel, and Curfs (2010) review a study of young women with Triple X. 30 of 37 stayed in school up to the age of 18, but only three out of 37 attended a higher education institution.

In contrast, half of the participants in this sample have had higher education, whilst the other five have achieved further education qualifications. One participant (FE) achieved a 'higher national certificate', a qualification that could form one third of a university degree, which one can study at a UK further education college: 'I did well at school. I moved to agricultural college and got a certificate in animal science'. This participant intends on saving money from her current job, and subsequently going to university to study theology. She has also developed self-taught music and writing: 'I write music, and I used to play brass instruments. And I'm in writing groups. I was put off doing these in school'.

In contrast, another participant (HE) is currently mid-university degree:

I did an access course, they didn't require formal qualifications. Now at university I get full special educational needs services ... and I got 94% for my sociology essay; I finally felt validated.

Mature students achieving 'fast-track' equivalent academic qualifications gain degrees of equal levels to those with traditional academic training (Hatt and Arthur 2003). This participant felt such endorsement following her previous experience at her further education college: 'my tutor wouldn't let me have additional support because she said I was too intelligent to be disabled'.

Farrell (2010) suggests that curriculum flexibility may be limited in supporting students who cannot keep up despite differentiation, due to cognitive delay. Two participants feel they were misunderstood by their school teachers:

(FE) I couldn't understand what teachers were trying to explain, and they didn't understand what was wrong with me, so they just left me. It's taken me years since to learn conversation skills.

And (HE): 'Teachers said to me, "why can't you think like the other children?" So I spent hours trying to work out how other children thought'. A participant did not feel there was a supportive environment in which they could disclose their agitation. (FE) 'I couldn't tell teachers if I was worried or upset'.

Three participants explained still having difficulties with telling the time as adults. (FE) 'I was being taught how to read a clock age 8 or 9, but it wasn't until I was about sixteen that I could fully read a clock'. Two other participants rely on digital time. (HE) 'I couldn't learn analogue time from a clock at school. So I use digital time'. A third participant uniquely depends on twenty-four hour digital time, having learned to understand it from train platforms as an adult: (FE) 'I can get buses and trains myself now, and I learned to tell the time from a twenty-four hour digital clock'. These demonstrate an unusual form of self-adaptation following a lack of successful learning at school, allowing these women to function self-sufficiently. The same participant (FE), has a unique qualification, outside of school: 'I used to be in the GB Paralympic tae kwondo team; I got a European gold medal'.

An educational catalyst could be the opportunities available to individual students either attending state or private school:

the segregation of children into schools hides from pupils, parents and even teachers any real knowledge of the differences between types of school ... (leaving) a hazy and often inaccurate knowledge (Reid 1986, 133).

That restricted knowledge of one educational path may have persisted (Delamont 2001). One participant felt confidence at aiming for higher education. (HE) 'I went to a private school. When I was fifteen I finally started to understand what they were trying to teach me. I could go to university because my school geared me for it'. This participant's degree experience was tolerable because she partially chose a lone-based approach: 'I got a first-class degree in theatre practice: prop making. In the final year I wrote an extended essay so I didn't have to work with people'. One participant (HE) who went through the state system was comparably supported at school: 'I had a mentor who supported me to get through exams'. Two other participants achieved a university degree: (HE) 'The academic part was stressful; disability services didn't understand my issues and I had to repeat the second year. But I got a 2:2 in film studies, a big achievement'. The second participant found

another alternative to traditional academic study: (HE) 'I went to a further education college and did a "national diploma" in countryside management, and then a university degree in conservation'.

Four other participants have so far achieved UK qualifications in further education. A second participant similarly went into animal care, but found writing a barrier, partly due to her Welsh/English bi-lingual status, and her study being in her second language. (FE) 'I did a vocational qualification Level 2 in health and social care. Level 3 wasn't for me, so I went on to do animal care, Level 3. I liked looking after animals, but the writing bit I found difficult.' Another participant described how she found reading instructions difficult: (FE) 'I did the nursery work qualification and passed the coursework, but I couldn't do the exam because I didn't understand the questions' (see Taylor, Lehman, and Raykov 2015). In the case of some working-class women with Triple X, the realm of language type available to them, i.e. 'restricted' (Reid 1986), could be an additional barrier to accessing the curriculum, however complex their ideas. Inability to articulate expressive thoughts and concepts could be seen to prevent a student from achieving. This could apply to one participant in the sample. (FE) 'I like textiles but I struggled with the writing, so they've said I can't do it. I did hairdressing instead'. One participant went to a special school, and then went on to two different special needs colleges (see Qu 2015):

(FE) 'At my residential college they couldn't cope with my behaviour. I went to another one, but I got into trouble sometimes. I learned life skills, dealing with money and learning to be independent'.

Chances of employment

For most women, it is noticeably difficult to find a connection between their education and journey into their labour market destinations; selecting, securing and maintaining employment did not necessarily relate to education attained, whether vocation specific or level of educational qualification, or to individual class identity. Eight women qualified to work in a vocational profession, with varying status and remuneration, yet only *one* (with a middle-class identity) pursued this as a job, albeit in a relatively low-paid, semi-skilled position (following her further education pathway), until she was made redundant: (FE) 'After animal science I worked in a zoo for five years.' Of the four participants in the HE category who have graduated from university, none have degree specific jobs, neither do they have graduate level work. Rather, they have significantly lower incomes than generally anticipated graduate occupations (see Elken and Tellman 2019).

In relation to emotional processing, two respondents described how they become overwhelmed: (HE) 'I trained as a counsellor, but I can't do it because I get too overloaded'. A second, who was previously bullied by her manager at work, stated:

(HE) I don't cope well with the working world; maybe I'm not very employable. There's an element in me that needs extra support, but I don't even know how I would ask for it.

Where possible, respondents appeared to find lone working more comfortable and less oppressive, perhaps including working with animals instead of people. Two further respondents explained how illness prevented their sustaining employment: (HE) 'I knew I would never make it in the competitive, fast-paced theatre world, getting up early and home late. I'm constantly tired and I get migraines.' Another is constrained by multiple medical conditions. (HE) 'I'm a pianist, but my chronic illnesses prevent me from doing that'. Reid (1986, 240) questions 'assumptions concerning the relationship between education and occupation, (where sometimes it is) pertinent to review the relationship of education to unemployment' (author's emphasis).

Women talked of how they acquired their jobs. Of the six women who currently have paid employment, only one (with a middle-class identity) secured her position herself, through formal application and interview. Despite this initial competence, this participant described her operational functioning of slow processing and significant anxiety: (HE) 'I reply to a work email, "can you tell me in bullet points *exactly* what you mean?" In work I suffer from panic attacks and migraines.' Four

participants found jobs through existing familial or otherwise local connections, and through this, two of these have a relatively stable contract. These cases were cross-class: (FE) 'I work in a fast-food takeaway. I normally do about 32 hours a week. I've been there six months'. And: (FE) 'I work in a post office full time. I've become more confident because you have to deal with money and customers'. A third participant preferred less pressured, casual work: (HE) 'I do shifts at the local café. And I'm doing voluntary work, in village planning and village hall stuff'. A third means of procuring work was to set up self-employment: (HE) 'I was a special needs teaching assistant, and now I do cat-sitting'.

Two participants expressed their difficulty at getting past the job interview stage. (FE) 'I'm not great at interviews, I've had lots and not got the job'. And, (HE): 'In a job interview I'm so nervous I can't ever think; my anxiety masks who I am'. According to a review of studies into women with Triple X, the majority of these young women would approach the world of work aged 18. They 'planned to take jobs requiring low academic and linguistic skills' (Otter, Schrandt-Stumpel, and Curfs 2010, 267). One (working-class) participant has an ambition to develop social skills in order to accomplish her dream: (FE) 'I qualified as a hairdresser, I am good. I was thinking I'll have a hairdressing business one day. But I can't talk to people'.

One participant does part time voluntary work teaching dance in a dance charity for people with learning difficulties, and a further participant has young children, and is studying maths at an adult education centre. Holborow (2018, 525) asserts that 'human capital theory' 'leaves out of its calculations wider structural social inequalities – of gender, race and class – a presence which disproves any simple correlation of possession of skills with earnings.' It seems likely that this includes individuals with SEN, and Triple X, where their skilled niche knowledge does not in fact reflect their subsequent income generation. This could indeed be exemplified by the cases of most participants.

Participants reviewed their feelings about having Triple X: (HE) 'I don't want a high-flying career, living life is hard enough. I'll tick the day off on my calendar and think it's one less to get through' (see Tomlinson 2017). Participants tolerate the lack of medical science knowledge differently: (FE), 'I do feel alone. For many years I've thought I'll die about age 50, because we don't know anything about it'. One participant accepts being different: (HE) 'I joke about the rule book of life being here, and I'm over there'. One participant was philosophical about her changing awareness: (FE) 'I was a lot more immature than people the same age as me. It's a different way of developing.' One participant was faced with negativity: (HE) 'I used to be told "*you'll never be able to do that*". But then my personal tutor told me I could do a PhD'. Two more participants explained how Triple X has given them an extra sense: (HE) 'it makes me extra feminine. I'm very observant; I pick up on people's moods. And I'm compassionate and caring'. And: (HE) 'I think Triple X is an 'other-ability'; it's part gift, part curse. I'm articulate and can represent people, but I have a learning disability to do with esteem and hypersensitivity'.

Discussion

Clinical literature on Triple X has considerably evolved since the detection of the condition in 1959. In 1961, the Johnston et al (1961) study of three young women showed photos of their naked bodies and their genitalia. The three women lived in a 'mental deficiency hospital', and it is perhaps no surprise that their IQ abilities were largely unidentifiable, and that consideration of their employability was unrealistic. Since that, regard for human value has clearly changed, but perhaps only according to current, conditional terms: 'The interplay of unequal power relations and political manoeuvres naturalises, legitimises and perpetuates the status quo of special educational thinking' (Liasidou 2010, 228). Young women with Triple X in education may only be recognised as far as their known traits allow, as opposed to all features of this condition being acknowledged and understood, let alone of individuals being addressed as themselves, according to a neuro-diverse perspective (Armstrong 2012).

Triple X appears to be an 'umbrella' condition, where cognitive capacity indicates a range of ability across the category as well as a range of health and wellbeing; but equally, socio-economic

position, combined with support network appear to be pivotal indicators of the education and life chances of a woman with Triple X. The purpose of education for these women is, as for anyone, to stimulate their intellectual growth, and ideally promote their employment (Kahyarara and Teal 2008). Interactionism invites the observation and analysis of these women's social behaviours and particularly their interactions with those in educational authority (Fine 2001). Postmodernism is the challenge of objectivised implicit rules, in cases where Triple X is not recognised or understood, and sometimes even denied by educational institutions (Farrell 2010).

Popkewitz (2012, 170) discusses 'the historical "making" of numbers as "social facts" inscribed as cultural practices' in the light of student self-assessment and related wide-scale comparative positioning, and considers societal and labour market implications of the rationale of education. He describes the culminating role of such 'social facts' in directing educational policy, where qualifications obtained are seen to fairly, and accurately, represent the child and establish a pattern of what is to be classified as 'normal'; the sample of Triple X women presented here would perhaps be viewed as 'ab-normal' according to these practices. The curriculum is intended for students' benefit, guiding one's citizenship and attributes for labour market and societal participation. Governance has however also led to 'measuring and procedures with principles that order the capacities and qualities of individuality' (Popkewitz 2012, 179). A requirement for principles that are 'normative' may exclude women with Triple X further, resulting in their invisibility and inability to compete in the 'meritocratic system' (Bourdieu 1990), irrespective of their educational achievements.

Limitations

Time and resource limitations prevented a wider research study, of for example globally comparative case studies. Post-compulsory education and employability research on the experiences of women with Triple X in different countries, and in different educational spheres, could of course produce entirely different results. The qualitative researcher only provides a single interpretation of the data, and further research adopting different interpretation, methodology or research design would be welcomed. A small-scale in-depth research study does not intend to generalise, rather to make exploratory observations of a foundational nature. Every effort is made to represent participants fairly and fully according to the contributions that they made; however the data collection was larger than the reflection of participants' contributions here, and some discussions were inevitably omitted.

Practice and research recommendations

Post-compulsory education institutions partly measure their achievement rates by 'student experience'; knowledge of Triple X would surely assist this. These education institutions also partly measure their success through student educational progression, and by student 'employability' (THE 2018; EURASHE 2020). Nationally and internationally, education institutions, in conjunction with employers, could identify such students and provide interventionist collaboration to focus not only on employability but actually on the gaining, and thereafter the maintenance of their employment (Taylor, Lehman, and Raykov 2015; Elken and Tellman 2019). There are multiple directions that research could go in assessing the social and educational experiences of women and girls with Triple X. The education of such women requires developmental research into the requirements of flexible, knowledgeable and appropriate special education. Particular research could operate in partnership with further and higher education institutions, to evaluate the Triple X education and employability programmes suggested above.

Conclusion

This research into education and work draws attention to the further and higher educational opportunities, experiences and achievements of ten women with Triple X. All women in the case

study secured a further education qualification, either academic or vocational, and half of the women achieved or are working towards gaining an undergraduate degree from a higher education institution. Case study women have differing cognitive capacities, but all expressed experiencing wide-ranging developmental and health barriers, as well as varying fortune in the receipt of familial and socio-economic support. Those participants who have so far achieved further education have developed employability skills and resilience, leading to some employment stability. Thereafter an extended education does not indicate greater chances of employment, given participants' processing delays, and varied social skills and sensitivities, as well as poor health for some, and employers' lack of understanding of these. Overall, education has not prepared participants for the world of work, with a lack of educational bodies' preparation in selecting, securing, or maintaining employment. However, participants not gaining education related employment does not invalidate their educational learning; maturity, a sense of independence, self-recognition and recognition by family and others is afforded to these women. Yet the ability to sustain oneself financially appears to be dependent on other considerations outside of the control of these women themselves.

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