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Gender Differences in Aggressive Behaviours Among Individuals with Intellectual Disability: The Moderating Role of Vulnerability Factors

Différences de genre en lien aux comportements agressifs chez des adultes présentant une déficience intellectuelle : le rôle modérateur des facteurs de vulnérabilité

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Abstract

The factors contributing to aggressive behaviours among individuals with intellectual disability (ID) are not fully understood. The goal of the present study was to examine whether vulnerability factors such as ID severity, speech, or motor impairments moderated gender differences in aggressive behaviours. Adults (n=296) with ID were recruited, and data on vulnerability factors and aggressive behaviours were collected through file reviews and interviews. Moderation analyses indicated that men were more likely to exhibit physical aggression than women, particularly those with a mild level of ID. Analyses also indicated that women were more likely to exhibit physical aggression than men, particularly those with speech impairment. Our findings suggest that gender-dependent vulnerability factors might contribute to aggressive behaviours among individuals with ID.

Résumé

Les facteurs contribuant à la manifestation des comportements agressifs (CA) chez les personnes présentant une déficience intellectuelle (DI) ne sont pas entièrement compris de par leur nombre et leurs relations. L'objectif de cette étude consistait à examiner si des facteurs de vulnérabilité tels que la sévérité de la DI, les incapacités du langage ou de la parole ainsi que les incapacités motrices avaient un

rôle modérateur dans les différences de genre et la manifestation de comportements agressifs. Méthode : Un échantillon de 296 adultes présentant une DI ont été recrutés. Des données portant sur des facteurs de vulnérabilité et les CA ont été recueillis par l'entremise de la consultation extensive des dossiers et d'entrevues auprès des intervenants pivot. Les analyses de modération ont montré que les hommes présentant une DI étaient plus susceptibles de manifester des comportements agressifs physiques, mais que cet effet était seulement observé chez les personnes présentant une DIL. De plus, les résultats ont montré que les femmes étaient plus susceptibles de manifester des comportements agressifs physiques que les hommes, mais cet effet était seulement observé parmi les personnes présentant des incapacités du langage. Les résultats suggèrent que des facteurs de vulnérabilité liés au genre peuvent contribuer à la manifestation de comportements agressifs chez les personnes présentant une DI.

Mots-clés: comportements agressifs, déficience intellectuelle, différences de genre, facteurs de vulnérabilité

Introduction

Aggressive behaviours among individuals with intellectual disabilities (ID) represent a major problem, with prevalence rates ranging from two to 60% across different settings (Bowring et al., 2017; Cooper et al., 2009; Crocker et al., 2006; Deb et al., 2001; Emerson et al., 2001; Lundqvist, 2013; Murphy & McGill, 2020). These rate variations can be possibly due to differences in the criteria used to define aggressive behaviour, the methods of collecting data, and differences in the characteristics of the sample such as age (Cooper et al., 2009). There has been considerable interest in exploring gender differences in aggressive behaviour among people with ID, but mixed findings were observed across studies (Koritsas & Iacono, 2012). Some studies have revealed higher rates of aggressive behaviour in men than in women (Emerson et al., 2001; McClintock et al., 2003, Tyrer et al., 2006). Others have revealed higher rates of aggressive behaviour among women (Cooper et al., 2009; Jones et al., 2008; Lundqvist, 2013). Finally, some found no gender differences in aggressive behaviour (Crocker et al., 2006; Holden & Gitlesen, 2006; Linaker, 1994).

There are a number of reasons that might account for these mixed findings. First, the bulk of studies in this area operationalized and assessed aggressive behaviour as a unitary construct, without considering the different types of aggressive behaviours that may be exhibited by individuals with ID. For instance, these may take the form of verbal, physical, or sexual aggression as well as self-injurious aggressive behaviours (Crocker et al., 2006; Crotty et al. 2014; Drieschner et al., 2013; Koritsas & Iacono, 2012; as cited in L'Abbé & Morin, 2001). There is some evidence that gender differences are apparent only for certain types of aggressive behaviours, which suggests that gender differences in aggression could be obscured by investigating only a single type of aggressive behaviour, or by combining different types of aggressive behaviours to create a unitary construct (McClintock et al., 2003; Smith et al., 1996; Tyrer et al., 2006). Another potential reason for the mixed findings is the use of group-level analyses. That is, gender differences in aggressive behaviour may be apparent only among specific subgroups of individuals, and these differences could be "masked" when analyses are conducted at the group level. For instance, higher rates of aggressive behaviour have been found

among women, but only among those with mental health problems (Cohen et al., 2010). Similarly, it is conceivable that men or women who present with specific pre-existing vulnerability factors may be more likely to exhibit aggressive behaviour. This possibility, however, has not been addressed in previous descriptive studies examining gender differences in aggressive behaviours (e.g., Chaïb & Crocker, 2013; Cooper et al., 2009; Crocker et al., 2006; Crocker et al., Reyes, 2014; Emerson et al., 2001; Holden & Gitlesen, 2006; Jones et al., 2008; Linaker, 1994; Lundqvist, 2013; McClintock et al., 2003; Tyrer et al., 2006).

One of the vulnerability factors that might underlie gender differences in aggressive behaviour is the severity of intellectual disability. Several studies have shown that more severe forms of intellectual disability (ID) are associated with an increased prevalence of aggressive behaviour (Cooper et al., 2009; Sigafoos et al., 1994; Smith et al., 1996). However, some have reported that the influence of ID severity on aggressive behaviour may vary with the type of aggressive behaviour. For instance, aggressive behaviour towards others are more prevalent in people with mild or moderate ID compared to those with more severe ID, and people with severe or profound ID were more likely to display self-harm behaviour compared to those with less severe ID (Crocker et al., 2006; Holden & Gitlesen, 2006; McClintock et al., 2003; Tsiouris, et al., 2011).

Physical and speech impairments could also be relevant for understanding gender differences in aggressive behaviours. Individuals with ID who have physical impairments, such as motor or sensory impairments, tend to display higher rates of aggressive behaviour than those without physical impairments (Crocker et al., 2014; Jones et al., 2008). Individuals with speech impairments tend to display higher rates of aggressive behaviours than those without (Emerson et al., 2001; McClintock et al., 2003). Given that physical and speech impairments may have different implications for men and women, these vulnerability factors might contribute to shaping gender differences in aggressive behaviour.

The goal of the present study was to examine whether gender differences in outward oriented aggressive behaviours (i.e., verbal, physical, property, and sexual) were moderated by ID severity, speech impairments, or motor impairments.

Methods and Materials

For this study, analyses were conducted using data from a larger parent study examining factors associated with aggressive behaviour among adults with ID living in the community who receive specialized ID services (in a previous study, citation withheld for review). Consent forms, procedures and data from the initial study were approved by the appropriate institutional ethics review boards according to Canadian Tri-Council research ethics guidelines (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada, 2010).

Participants

Men and women recruited for the study met the following inclusion criteria: between 18 and 65 years of age, receiving services for at least a year from specialized ID services agencies in the three large regions of the province of Québec, have a diagnosis of a mild or moderate ID,

understand English or French, and consent to participate or have their representative consent (public or private trustee, tutor).

Individuals with severe and profound ID were excluded for the purpose of the past study (Crocker et al., 2007). At the time of the past study, less literature was available on factors associated with outward aggressive behaviour, particularly among individuals with mild or moderate ID. Moreover, this specific population is at greater risk of being in contact with the criminal justice system when exhibiting outward aggressive behaviour. Therefore, the authors of the past study focused on documenting their profiles to orient intervention programs.

For the parent study, potential participants with ID were randomly selected from a large pool of individuals (n= 1714) with ID. The random selection of participants was made using a stratified random sampling procedure to select both individuals with and without a past history of aggressive behaviour (in the 12 months prior to the study). Because the objective of the previous study was to identify profiles of outward oriented aggressive behaviour, individuals who displayed only self-injurious behaviour were excluded from the 2007 study sample. A total of 458 individuals were initially selected for the 2007 study. From this sample, some individuals did not meet study eligibility criteria (n=68), some individuals declined study participation (n=92), and some had missing data (n= 2). The final sample for the parent and present study (citation withheld for review) consisted of 296 adults (162 men and 134 women, M_{age} = 40.67) with mild or moderate ID. See table 1 for a description of the sample.

Measures

Using an interview guide, extensive file reviews and interviews with the primary case manager were undertaken to gather the most valid and recent information for each participant. Case managers had known the participants on average for 5.69 years (SD = 6.5), and approximately 85% had more than 10 years experience working in the field of ID. Training and ongoing supervision were provided to the research assistants collecting data.

Sociodemographic information. Age, gender, and residential status (apartment, family, or group home) were coded through interviews with the case manager and through review of client files. The apartment category captured participants that were living in supervised or independent settings.

Intellectual and physical characteristics. Level of ID was identified from participants' files. Prior to admission to ID services, all participants had a full assessment of intellectual functioning performed by a certified psychologist or a psychiatrist. Physical impairments (motor, visual, auditory, speech or language impairments) were also identified from files. These impairments were diagnosed by competent professionals.

Aggressive behaviour. The Modified Overt Aggression scale (MOAS) (Yudofsky et al., 1986; Kay et al., 1988) was completed through interviews with case managers to assess aggressive behaviour manifested within the past 12 months. The MOAS is designed to assess four types of aggressive behaviour: verbal aggression (e.g., shouting, cursing, and threatening

impulsively or repeatedly), physical aggression (e.g., grabbing, striking, pushing, kicking, causing injuries), aggression towards property (e.g., kicking furniture, breaking objects dangerously), and self-harm (e.g., picking skin, banging head, cuts or injuries). These four types of aggressive behaviour were coded on a 5-point scale ranging from 0 (*no such behaviour*) to 4 (*highest level of such behaviour*). This scale was developed primarily for psychiatric populations but has demonstrated good inter-rater reliability when used with populations with IDs (Bhaumik et al., 2009; Oliver et al., 2007; Tyrer et al., 2008). Sexually inappropriate aggressive behaviour (e.g., threatening with sexual statements, exposing genitals, sexually touching others, having sexual coercive activities) was added to the MOAS in a previous study and was used for the present research.

Outward aggressive behaviour in this study refers to four types of aggressive behaviour towards others or the environment measured by the MOAS: verbal, physical towards property, and sexually inappropriate. Inward aggressive behaviour refers to self-harm from the MOAS.

Screening for Mental Health Problems. The Reiss Screen for Maladaptive Behaviour (RSMB) (Reiss, 1988) was used to identify those who are likely to have mental health problems. This 38 items tool is rated on a 3-point scale ranging from 0 (*not a problem*) to 2 (*a major problem*). The eight subscales are: (1) *Aggressive Behaviour*, (2) *Autism*, (3) *Psychosis*, (4) *Paranoia*, (5) *Behavioural Signs of Depression*, (6) *Physical Signs of Depression*, (7) *Dependent Personality Disorder*, and (8) *Avoidant Personality Disorder*. The case manager completed the RSMB.

Data Reduction and Analysis

Data were analyzed using SPSS version 21. Descriptive results for continuous variables were presented as means and standard deviations, and as percentages for categorical variables (see Table 1).

For the purpose of this study, four distinct indices of outward oriented aggressive behaviour (i.e., verbal, physical, property, and sexual) were derived based on the MOAS. Each of these indices was coded dichotomously, indicating either the presence or absence of each outward oriented aggressive behaviour within the 12 months prior to interviews.

A series of chi-square tests were then conducted to examine whether men and women differed significantly on any of the aggressive behaviour indices (i.e., verbal, physical, property, and sexual) as well as to examine whether aggressive behaviours varied as a function of ID severity (mild, moderate), speech impairments (presence, absence), or motor impairments (presence, absence). In order to adjust for potential family-wise error (i.e., Type I error, a Bonferroni-corrected *p* value was calculated and reported along with uncorrected *p* values. Bonferroni corrections took into account the number of analyses conducted for each of the primary independent variables (gender, ID severity, speech impairments, and motor impairments). Given that four distinct tests were conducted for each independent variable, Bonferroni correction for family-wise error set the alpha level for significance at $p < .012$ (i.e., .05/4).

To examine the potential moderators of gender differences in the various types of aggressive behaviours, three distinct sets of hierarchical logistic regression models were carried out. Logistic regression models were conducted separately for each of the three potential moderators

(i.e., ID severity, speech impairments, and motor impairments). In order to minimize the number of statistical tests and the likelihood of Type I error, the outcome used in these regression models was determined based on the significance of univariate associations between each of the moderators and aggressive behaviour indices that were a priori tested using chi-square tests. In each of the logistic regression models, two-way interaction terms between *gender* and each of the other potential moderators (i.e., ID severity, speech impairments, and motor impairments) were specified. These interaction terms were then included in three separate models, after the inclusion of appropriate main effects. Any significant two-way interaction effect would suggest that gender differences in aggressive behaviours were moderated by ID severity, motor impairments, or speech impairments.

Before conducting logistic regressions, we first examined the potential confounding influence of demographic variables (i.e., age, ethnicity, and residential setting) and mental health problems (i.e., Reiss scores) on each of the aggressive behaviour indices. Variables significantly associated with aggressive behaviour were included as covariates in models described below. In all the logistic regression models that were built, coefficients were below 10 and above 0.2 for the variance inflation factor and the tolerance, respectively. These data indicate that the regression models were not affected by multicollinearity.

Results

Descriptive Statistics

Descriptive statistics are presented in Table 1 separately for women and men. Women were older than men, t (283.91) = 3.16, $p < .01$. Men and women did not differ significantly in terms of ID severity ($\chi^2 = 1.18$, *ns*) or speech impairments ($\chi^2 = 0.83$, *ns*), but women had greater motor impairments than men, $\chi^2 = 5.6$, $p < .05$.

Table 1

Descriptive Statistics

Variables	Men (n = 162)	Women (n = 134)
Age (years)	38.67 ± 12.06	43.12 ± 11.99
ID severity (%)		
Mild	45.1	38.8
Moderate	54.9	61.2

Residential settings (%)		
Apartment	13.0	20.1
Family	30.9	19.4
Group home	56.2	60.4
Speech impairments (%)	27.8	23.1
Motor impairments (%)	16.0	18.7
Visual impairments (%)	8	9.7
Auditory impairments (%)	8.9	9.9

Note. ± are standard deviations.

Psychiatric Diagnoses

According to the information gathered from the client files, 23,7% of the participants had a psychiatric diagnosis. Based the Reiss Screen for Maladaptive Behavior (RSMB) (Reiss,1988), 115 (39.5%) participants reached the cut-off for a possible mental health problem.

Rates of Aggressive Behaviour

Table 2 presents rates of aggressive behaviours, separately for men and women. As reported in the parent study, 255 (86.1%) participants displayed at least one type of outward oriented aggressive behaviour, and 36 (12.2%) participants displayed all four types of aggressive behaviour. The most frequent type of aggressive behaviour was verbal aggression (77.7%) and the least prevalent was sexually aggressive behaviour (20.3%).

Table 2

Percentage of Individuals Exhibiting Each Type of Aggressive Behaviour

Aggressive behaviour	Men (n = 162)	Women (n = 134)	p
Verbal	74.1	82.1	*ns*
Property	64.8	59.7	*ns*

Physical	56.8	52.2	*ns*
Sexual	19.1	21.6	*ns*

Aggressive Behaviour as a Function of Gender

Men and women did not differ significantly in verbal aggression ($\chi^2 = 2.7$, *ns*), physical aggression ($\chi^2 = 0.61$, *ns*), property aggression ($\chi^2 = 0.82$, *ns*), or sexual aggression ($\chi^2 = 0.29$, *ns*).

Aggressive Behaviours as a Function of ID Severity

Individuals with moderate ID were significantly more likely to exhibit physical aggression than individuals with mild ID, $\chi^2 = 8.6$, $p < .005$ (significant at .012 Bonferroni-corrected alpha). Individuals with mild and moderate ID did not differ significantly in other types of aggressive behaviour (all p values > .05).

Aggressive Behaviour as a Function of Speech and Motor Impairments

Individuals with speech impairments were significantly more likely to exhibit physical aggression than those without speech impairments, $\chi^2 = 9.3$, $p < .005$ (significant at .012 Bonferroni-corrected alpha). Individuals with and without speech impairments did not differ significantly in other types of aggressive behaviour (all p values > .05). A marginally significant effect was found for motor impairments, with individuals having motor impairments being more likely to exhibit verbal aggression than those without motor impairments, $\chi^2 = 2.9$, $p = .08$. Individuals with and without motor impairments did not differ in other types of aggressive behaviour (all p values > .05).

Moderating Role of ID Severity, Speech Impairments, and Motor Impairments in the Association Between Gender and Aggressive Behaviour

Before conducting moderation analyses, we first examined the potential confounding influence of demographic variables and mental health problems on aggressive behaviours. Given that mental health problems and residential setting exerted a significant influence on aggressive behaviours, regression analyses were first conducted using these two variables as covariates (i.e., adjusted model), and then repeated without the inclusion of these covariates (i.e., unadjusted model). Given that adjusted and unadjusted models yielded similar patterns of findings, results of unadjusted moderation models are presented.

Moderating role of ID severity. Given that moderate ID was associated with a significantly greater likelihood of physical aggression, a logistic regression was conducted using the physical aggression index as the outcome (see Table 3). In this regression model, the main

effects of gender and ID severity were first specified, followed by the two-way Gender × ID severity interaction term. Results of this analysis revealed a significant main effect for ID severity, $B = 1.3$, $SE = 0.38$, $p < .001$, indicating that individuals with moderate ID were significantly more likely to exhibit physical aggression than individuals with mild ID. Results also revealed a significant Gender × ID severity interaction effect, $B = -1.1$, $SE = 0.49$, $p < .05$. Results indicated that men were more likely to exhibit physical aggression than women, but this effect was only observed among individuals with a mild level of ID.

Moderating role of speech impairments. Given that the presence of speech impairments was associated with a significantly greater likelihood of physical aggression, a logistic regression was conducted using the physical aggression index as the outcome (see Table 3). In this regression model, the main effects of gender and speech impairments were first specified, followed by the two-way Gender × Speech impairments interaction term. Results of this analysis revealed a significant main effect for speech impairments, $B = 1.7$, $SE = 0.50$, $p < .005$, indicating that individuals with speech impairments were significantly more likely to exhibit physical aggression than individuals without speech impairments. Results also revealed a significant Gender × Speech impairments interaction effect, $B = -1.4$, $SE = 0.61$, $p < .05$. Results indicated that women were more likely to exhibit physical aggression than men, but this effect was only observed among those with speech impairments.

Moderating role of motor impairments. Given that the presence of motor impairments was associated with a marginally significantly greater likelihood of verbal aggression, a logistic regression was conducted using the verbal aggression index as the outcome. In this regression model, the main effects of gender and motor impairments were first specified, followed by the two-way Gender × Motor impairments interaction term. Results indicated that the Gender × Motor impairments interaction was not significant ($p > .05$), indicating that motor impairments did not moderate gender differences in verbal aggression.

Table 3

Moderating Role of ID Severity in the Association Between Gender and Physical Aggression

Variables	*B*	*SE*	*OR*	Wald	*p*
Gender	0.86	0.38	2.4	5.2	< .05
ID severity	1.3	0.38	3.8	12.5	< .001
Gender × ID severity	-1.1	0.49	0.34	4.8	<. 05

Moderating role of speech impairments in the association between gender and physical aggression

Gender	0.44	0.27	1.6	2.6	*ns*
Speech impairments	1.7	0.50	5.4	11.5	< .005
Gender× Speech impairments	-1.4	0.61	0.25	5.0	< .05

Note. Values are from the final regression model. *B* = regression coefficient; *SE* = standard error; *OR* = odds ratio.

Discussion

The primary purpose of the present study was to examine the potential factors underlying gender differences in aggressive behaviours among individuals with ID. More specifically, we examined whether gender differences in aggressive behaviours were moderated by potential vulnerability factors such as ID severity, speech impairments, or motor impairments.

In the present study, results indicated that men and women did not differ significantly in any type of aggressive behaviour. This is consistent with findings of several previous studies that have not observed any gender differences in aggressive behaviour among individuals with ID (Crocker et al., 2006; Emerson, 2002; Holden & Gitlesen, 2006; Linaker, 1994).

The present study examined whether ID severity moderated gender differences in aggressive behaviour. Results indicated that individuals with moderate ID were significantly more likely to exhibit physical aggression than individuals with mild ID, which is consistent with findings from a number of studies showing that more severe forms of ID are associated with an increased prevalence of aggressive behaviour (Cooper et al., 2009; Sigafoos et al., 1994; Smith et al., 1996). Interestingly, we found that ID severity moderated the association between gender and physical aggression. More specifically, results indicated that men were more likely to exhibit physical aggression than women, but this effect was only observed among those with a mild level of ID. One potential explanation for this finding is that women with a mild ID possess a more adaptive and socially acceptable repertoire of behaviour than men, resulting in less frequent outward aggressive behaviours when interacting with others. For instance, Bennett et al. (2005) reported that women exhibit lower criminal offending rates because they have better prosocial skills and developed social cognitive skills earlier in life than men. Among individuals with more severe forms of ID, the greater extent of neurological damages that likely underlie their condition could possibly lead to automated aggressive behaviours (Allen, 2000), overriding the tendency to use any form of adaptive or socially acceptable behaviours. That might possibly contribute to explaining why gender differences in aggressive behaviour were not observed among individuals with more severe forms of ID.

In the present study, we also examined whether speech impairments moderated the association between gender and aggressive behaviours. We found that speech impairments were associated with a greater likelihood of physical aggression, which is in line with some studies that have found that aggression is more common in people with communication impairments (Emerson et al., 2001; Lundqvist, 2013; McClintock et al., 2003). Results from follow-up moderation analyses revealed that women were more likely to exhibit physical aggression than men, but only among those with speech impairments. Although speculative, this finding might be explained by gender differences in the tendency to rely on verbal channels (i.e., speech) in order to express emotions and/or other basic needs. For example, social psychology theory and research suggests that women tend to preferentially rely on verbal channels in order to express emotions and communicate needs to others (Brody, 1985; DePaulo, 1992; Goldshmidt & Weller, 2000; Tamres et al., 2002). It is possible that women with speech impairments become particularly more reliant on physical aggression than men when verbal communication channels are altered or limited (Sigafoos et al., 2003), mainly as a way to communicate needs or express emotions.

Analyses were also conducted to examine whether motor impairments moderated the association between gender and aggressive behaviour. We found that individuals with motor impairments were more likely to exhibit verbal aggression than those without motor impairments. However, motor impairments did not moderate gender differences in verbal aggression. It is possible to believe that men and women, limited in their mobility because of motor impairments, will rely similarly on verbal communication to express emotions or basic needs. Therefore, displaying verbal aggressive behaviour is the most or only accessible behaviour. This result remains to be replicated, but it can still be taken into account by clinicians while completing a functional behaviour assessment.

Results from the present study have implications for services offered to persons with ID who manifest aggressive behaviour. We found that men and women differ with respect to two correlates of physical aggression, namely ID severity and the presence of speech impairments. This observation suggests that ID severity may be a more important factor to consider for men than women when dealing with aggressive behaviour. Furthermore, women who have a speech impairment may be more prone to physical aggression than men with similar impairments. These results may help identify vulnerable women who may potentially exhibit physical aggressive behaviour. Furthermore, women or even girls with speech impairments may be prioritized for alternative communication skills training. Knowing that challenging behaviour occur in 25% of children with ID compared to four to nine percent of typically developing children (Harris, 2010), it is therefore important to address that issue early in life. Communication impairment, limiting the ability to express frustration, external factors or underlying physical and emotional distress, is a major factor in challenging behaviour (Marrus & Hall, 2017). If few interventions in communication skills training and in socio-emotional competencies are offered at a young age (Légaré et al., 2019), it is possible that challenging behaviour may occur and be maintained during the developmental trajectory of people with ID. Early access to professionals, such as speech therapists and psychologists, is therefore essential not only for children with ID but also for their parents, educators, and school teachers.

Moreover, our results support the importance for Canadian policy makers to limit the service gaps between pediatric and adult health care system in order to address the multiple and complex needs of people with ID (Sullivan et al., 2011). While applying functional behaviour assessment, caregivers, and healthcare professionals should take into account the possibility that women with

speech impairments may use physical aggressive behavior to express needs or emotions rather than other types of aggressive behaviour. Also, both men and women with motor impairments may be more prone to use verbal aggression to express needs or emotions. Even if these vulnerability factors cannot be modified, taking them into account may help identify the most vulnerable ones, and may help prevent aggressiveness. Ultimately, the prevention or reduction of aggressive behaviours could possibly contribute to minimizing the use of restrictive measures within this population, such as seclusion or restraint.

Limitations

A number of limitations must be taken into account when interpreting the present findings. First, as with any cross-sectional study, it is not possible to conclude any causal associations between study variables and aggressive behaviour. Second, before suggesting changes to service provision, the findings require to be replicated and verified using other research methods. To our knowledge, no other studies have identified women with speech impairments as more likely to exhibit physical aggression than men. Therefore, studies including men and women with all levels of ID, precise information regarding speech impairments (e.g., types), and measures of different types of aggressive behaviour (inward and outward) are required. Third, the present study is limited to adults receiving specialized ID services. Our findings may not apply to persons with a mild or moderate ID receiving mainstream services. Moreover, our results cannot be generalized to individuals with more severe forms of ID, as the present sample only included individuals with mild or moderate levels of ID. Fourth, data on ID severity, speech impairments and motor impairments were collected through a review of client files and interviews with case managers. Although this is a common data collection method in the area of ID research (Flynn et al., 2002; Joyce et al., 2001), the reliability of study measures was dependent upon the expertise of other professionals and the accuracy of data obtained through interviews. To mitigate this, research assistants were trained to conducting interviews and ongoing supervision was offered during the entire data collection process. Moreover, at the time of interviews, case managers had known participants for several years and had many years of experience working in the field of ID. Finally, because of the objectives of the parent study, the question regarding gender differences in self-injurious behaviour could unfortunately not be addressed. The authors think that it is important to study each type of aggressive behaviour separately in order to broaden our understanding of the factors associated to aggressive behaviour, such as for self-injurious behaviour. There is some evidence that self-injurious behaviour is more prevalent in people with more severe ID (Crocker et al., 2006; Emerson et al., 2001; McClintock et al., 2003). There is also some evidence that women with ID tend to display more self-aggression than men (Crocker et al., 2006). Therefore, gender differences regarding self-injurious behaviour in the ID population remain unclear unlike in the general population. More research is needed.

Conclusion

In summary, our findings provide new insights into the factors that underlie gender differences in aggressive behaviours among individuals with ID. Taken together, our findings suggest that gender differences in aggressive behaviours might be apparent only among certain subgroups of

individuals. They suggest that subgrouping individuals based on ID severity and speech impairments might be important in order to better understand gender differences in aggressive behaviours among individuals with ID. Advances in this domain might ultimately lead to reduced rates of aggressive behaviour among men and women with ID.

Key Messages

People with disabilities: As a man or a woman, you can have the appropriate support to feel better and reduce challenging behaviour.

Professionals: While applying functional behaviour assessment, professionals should take into account subgrouping individuals based on ID severity and speech impairments might be important in order to better understand gender differences in aggressive behaviours among individuals with ID.

Policy makers: Policy makers should prioritize early access to services, limit the gap services between pediatric and adult health care systems and take into account gender specificities in aggressive behaviours to develop gender sensitive prevention and intervention programs for people with intellectual disabilities.

Messages clés de l'article

Personnes ayant un handicap : En tant qu'homme ou femme, vous pouvez recevoir le soutien adéquat afin de vous sentir mieux et de réduire les comportements agressifs.

Professionnels : Lors de l'analyse fonctionnelle des comportements agressifs chez les personnes présentant une déficience intellectuelle, il pourrait pertinent de tenir compte du niveau de sévérité ainsi que de la présence d'une incapacité du langage afin de mieux comprendre les différences de genre dans la manifestation des comportements agressifs.

Décideurs : L'accès précoce aux services ainsi que la réduction de l'écart de services entre le système de santé pédiatrique et adulte se doivent d'être des actions prioritaires. De plus, il s'avère pertinent de tenir compte des besoins spécifiques liés au genre dans la manifestation des comportements agressifs afin de développer des programmes de prévention et d'intervention sensibles au genre pour les personnes présentant une déficience intellectuelle.

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