## Résumé de présentation par affiche de Valérie Elliott dans le cadre de la 10e Édition des Journées de la recherche du RQRV.

**VIRTUAL REALITY AS TREATMENT APPROACH FOR OLDER WOMEN WITH MIXED URINARY INCONTINENCE**

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**Objectif:** The objectives of the study were (1) to evaluate the feasibility of a combination of pelvic floor muscle (PFM) exercises and virtual reality rehabilitation (VRR) (PFM/VRR) to treat mixed urinary incontinence (MUI) among older women, (2) to evaluate the effectiveness of the PFM/VRR program on MUI symptoms, quality of life (QoL), and PFM function, and (3) to gather quantitative information regarding patient satisfaction with the PFM/VRR training program. **Méthodologie:** Women 65 years and older with at least two weekly episodes of MUI were recruited. Participants were evaluated two times before (pre-1 & pre-2) and one time after (post) a 12-week group PFM/VRR training program. Feasibility was defined as the participants' rate of participation in and completion of both the PFM/VRR training program and the home exercise program. The evaluations included a three-day bladder diaries, one-hour modified pad test, symptom and quality of life (QoL) questionnaires, PFM function testing with the Laycock's PERFECT 6-point scale and satisfaction questions. **Résultats:** 24 women (70.5 ±3.6 years) participated. The majority of participants complied with the study demands in terms of attendance at the weekly treatment sessions (91%), adherence to the home exercise program (92%) and completion of the three (pre1 & 2 and post) evaluations (96%). Following the intervention the frequency and quantity of urine leakage decreased and patient-reported symptoms and QoL improved significantly. The P (power) and the T (timing) of the PERFECT scores changed significantly after treatment. Finally, the majority of patients were very satisfied with treatment (91%) and the appreciation score of the VRR component of the training program was 9.8 (+ 0.5) on 10. **Discussion:** This feasibility study demonstrated that women, aged 65 and over, with mixed UI are good candidates for a PFM/VRR programme and are capable of complying with study demands. The PFM/VRR programme was also effective in reducing UI symptoms, enhancing QoL and improving PFM strength and coordination. Indeed, the addition of a VRR component may also improve adherence to PFM rehabilitation.

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## Résumé de présentation par affiche de Stéphanie Pontbriand-Drolet dans le cadre de la 10e Édition des Journées de la recherche du RQRV.

**DO PELVIC FLOOR DEFICITS DIFFER IN WOMEN WITH STRESS OR MIXED URINARY INCONTINENCE?**

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**Objectif:** With a focus on continent, stress (SUI) and mixed (MUI) urinary incontinent women, the study's aim was to compare: a) pelvic floor muscle (PFM), bladder neck and urethral sphincter morphology using magnetic resonance imaging (MRI) under 3 conditions (rest, PFM maximum voluntary contraction [MVC] and straining) and b) pelvic floor contractile function using digital palpation with Laycock's PERFECT scheme. **Méthodologie:** An experienced pelvic floor physiotherapist taught the women how to perform PFM contractions correctly and assessed PFM contractile function, which was followed by a dynamic 3T MRI session. **Résultats:** 66 women (22 per group), mean age of 67.70 (5.24), participated in the study. Groups were similar for age, BMI, vaginal deliveries and hysterectomies. To control for the potential effect of pelvic size on study parameters, participants were matched across the 3 groups based on pelvic inlet length. MUI women seemed to have a lower PFM resting position and a lower pelvic organ support at rest, based on the differences in M-Line, PCL/H-Line angle and Urethrovesical (UV) junction height. SUI women seemed to have a PFM morphology similar to that of continent women, but presented a greater occurrence of bladder neck funnelling. The posterior urethrovesical (PUV) angle was also larger in SUI women, further supporting the greater occurrence of funnelling. Urethral sphincter morphology was not related to either SUI or MUI symptoms as there were no differences in urethral sphincter thickness, area and volume between the groups. Functionally, both UI groups had poorer PFM strength on MVC as compared to the continent women. Additionally, the MUI group showed poor PFM elevation on contraction, probably related to the lower position of their PFMs at rest. Conversely, the SUI women seemed to have a timing problem with PFM contractions. **Discussion:** The deficits in SUI and MUI women appear to be very different; nonetheless, they all support the rationale for PFM exercise treatment in older women with SUI and MUI. However, the present findings support the need for rehabilitation treatment specificity for each UI type.

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