

## Poster digest

### Introduction

Well done to everyone who entered the 2019 POGP poster competition!

We were delighted to receive the five submissions that are printed below. The entrants have all worked hard to present their research and service developments in creative and engaging ways.

Members of the Educational Subcommittee used a scoring system to judge the posters anonymously. Congratulations go to Clare Monaghan, Kate Reece and Jill Lomas (Fig. 1) for their winning poster, “Digital self-referral to antenatal physiotherapy using MyPathway” (see pp. 58–59). They have been awarded a prize of £50. This fantastic service development is superbly presented, and we hope that this information will be useful to other physiotherapy teams.

Since we did not hold a conference last year, the prize for best platform presentation was not awarded. In 2020, our usual competition for both posters and platform presentations will return.



**Figure 1.** Kate Reece (left) and Clare Monaghan (right), winners of the 2019 POGP poster competition.

In preparation, I recommend that you read Kay Crotty’s article on how to design a poster (Crotty 2018), and start to work up your ideas. I look forward to even more entrants sharing their work at Conference next year.

Short summaries and thumbnail-sized images of the posters are printed below. The full-sized versions can be viewed on the POGP microsite (<https://pogp.csp.org.uk/>).

**Shirley Bustard**  
Research Officer

### Reference

Crotty K. (2018) Guidelines for preparing a poster for presentation at the POGP Annual Conference. *Journal of Pelvic, Obstetric and Gynaecological Physiotherapy* 123 (Autumn), 47–49.

### Digital self-referral to antenatal physiotherapy using MyPathway

Presently, antenatal women suffering from pain have to see a midwife before being referred to women’s health physiotherapy (WHPT), which delays their first appointment. Currently, the WHPT referral forms at Sheffield Teaching Hospitals NHS Foundation Trust (STHNHSFT), Sheffield, UK, omit relevant details, which causes problems with regard to appropriate triage. A pilot study was completed to gather data to test the feasibility of implementing a new self-referral (SR) pathway. The aims of this study were to: improve women’s accessibility to WHPT; monitor the did-not-attend (DNA) rate; and ascertain patients’ and midwives’ views about the new pathway. The ultimate aim was to explore web-based SR as a future service innovation. Five hundred antenatal women were informed of the SR pathway, and encouraged to use it between February and September 2019. Data on the quality of the referral information, attendance and patient satisfaction were analysed. Thirty-seven referrals were received during the pilot, and the DNA rate reduced from 10% to 2.7%. Women were seen earlier in their pregnancy when they self-referred. One hundred per cent of patients recommended SR as a way of accessing WHPT. Midwives responded positively, stating that the pathway saved their clinical and

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**Sheffield Hospitals Charity**

## Digital self-referral to antenatal physiotherapy using MyPathway.

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 Jill Lomas, MSK Programme Manager.

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### Background

- There are 6,500 births in Sheffield per year. About 1,250 antenatal referrals are received by the Women's Health Physiotherapy Team (WHPT).
- Research shows that if a woman has high pain ratings in her third trimester there is an increased incidence of assisted delivery or Caesarean section and a longer and more painful time during labour (Brown et al, 2013).
- High pain scores during pregnancy are linked with persistent postpartum pain, therefore it is pertinent to treat women in a timely manner to reduce pain and help optimise their birth experience (Abbot et al 2011).
- Midwives and GPs are presently the "gate keepers" to access WHPT.
- Self-referral into WHPT will empower women, streamline their care and save GP and midwife appointments.
- The Chartered Society of Physiotherapists found that 88% of patients would prefer to refer themselves to physiotherapy rather than wait to see their GP (see NHS Improvement 2018).
- Self-referrals for antenatal women into Women's Health Physiotherapy are used successfully within other NHS Trusts.
- The current referral forms often do not include enough relevant detail, causing problems in triaging patients for the most appropriate type of appointment.
- A self-referral pilot study, approved by the Trust's Clinical Effectiveness Unit, was completed to gather data to test the feasibility of implementing this new self-referral pathway.

### Aims of pilot study

- To improve women's accessibility to the WHPT.
- To monitor the Did Not Attend (DNA) rate compared with current practice.
- To assess the quality and quantity of data provided on the referral forms.
- To gain patients' views of the new self-referral pathway.
- To gain the midwives' views of the new self-referral pathway.
- To explore web-based (rather than paper) self-referrals as a future service improvement.

### Method

- 500 self-referral forms and information sheets were placed in women's maternity notes.
- Women with pelvic girdle pain or low back pain, pelvic floor dysfunction, carpal tunnel syndrome or abdominal separation were encouraged to self-refer as required.
- Data on quality of referral information, attendance and patient satisfaction was collected and analysed.

### Results

- 37 referrals were received during the pilot study.
- DNA rate reduced from 10% to 2.7% during the pilot study (The Trust's target is 7.6%).
- 100% of patients with pregnancy-related conditions would recommend self-referral as a way of accessing the WHPT.
- Midwives responded positively by saying it saved their clinic and administration time.
- Clear improvement seen in the quality and quantity of data provided on the self-referral forms, which allowed the WHPT to triage more confidently and accurately.
- 22% more women self-referred in their second trimester and 24% fewer women self-referred in their third trimester compared to the current pathway.

### Patient Feedback

"I chose self-referral because..."

- Early convenience
- Being in control
- Able to be proactive
- Less waiting time
- Not having to wait to visit GP or midwife

### Benefits of MyPathway App

- To enable self-referral at the time of patient need.
- Self-management for antenatal women to provide them with information, self-help and in-app alerts.
- Achieve 24 hour turnaround from patient self-referring to appointment offer.
- Midwives will be able to accept referrals to ensure accessibility for all (e.g. language barriers).
- Reduce GP workload.
- Reduce the DNA rate through increased autonomy of booking appointments.
- Reduce the DNA rate through the use of in-app appointment reminders.

### Conclusion

- The pilot study successfully highlighted the benefits of self-referral into WHPT to the MSK and Obstetric, Gynaecology and Neonatology Directorates in STH Trust.
- As a result, the MSK Directorate, with the Trust's full support, has agreed to implement a new digital self-referral pathway into WHPT.
- The impact that the new digital self-referral pathway will have on the WHPT service, will be monitored and refined as future data is collected.

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 https://www.researchgate.net/publication/312000000

**Figure 2.** Poster: "Digital self-referral to antenatal physiotherapy using MyPathway".

administration time. Improvements were seen in the quality and quantity of the data provided, allowing the STHNHSFT WHPT service to triage more confidently and accurately. Following the pilot study, a business case was developed for integrating SR to WHPT into an existing digital app, MyPathway (Advanced Digital Innovation, Saltaire, West Yorkshire, UK). This was funded by the STHNHSFT charitable trust. The pilot study highlighted the benefits of SR to WHPT, and as a result, the STHNHSFT Musculoskeletal Directorate has agreed to implement a new digital SR pathway to WHPT. The impact that the new digital pathway will have on the WHPT service will be monitored and refined as future data are collected. MyPathway is the first digital SR app that is not paper- or web-based. It will empower women to self-refer at their point of need, streamline their care and reduce the DNA rate for WHPT.

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## Review of antenatal education: pelvic floor exercise in the postpartum woman

Antenatal classes are delivered by clinical specialist physiotherapists in the women's health service in three hospitals across the Southern Health and Social Care Trust (SHSCT) in Northern Ireland. The aims of this project were to: establish awareness within a defined group of women of the role of pelvic floor exercises (PFEs) during pregnancy; confirm that PFEs were being taught at antenatal classes by physiotherapists at the SHSCT; and ensure that any postnatal women who had been identified as having problems with their pelvic floor muscles (PFMs) were receiving appropriate physiotherapy treatment. As advised by the SHSCT Personal and Public Involvement Department, the authors undertook some service-user research on a draft telephone questionnaire, and made amendments to reflect their findings. A sample of 60 women were selected at random from the defined geographical area represented by the SHSCT. In February 2019, a telephone questionnaire was conducted 5–6 months postpartum. The results were as follows:

- "Were you aware of the importance of doing PFEs prior to your antenatal education?" Yes: 72%; no: 28%.

## Review of Antenatal Education Pelvic Floor Exercise in the Postpartum Woman

### Aims

- To establish awareness within a defined group of women of the role of pelvic floor exercises during pregnancy.
- To confirm that pelvic floor exercises were being taught at antenatal classes by physiotherapists in SHSCT.
- To ensure that any postnatal women who had ongoing issues with their pelvic floor muscles were receiving appropriate physiotherapy treatment.
- To partner with SHSCT PPI department in this Service User Involvement project.

### Method

Telephone Questionnaire February 2019 at five to six months postpartum.

We obtained a sample of 60 women in SHSCT

- 20 in Daisy Hill Hospital
- 20 in Armagh & Dergamoon
- 20 in Craigavon & Banbridge

Telephone Questionnaire: Awareness of pelvic floor exercise - antenatal and post-natal. Education of the pelvic floor muscles/benefit/post-natal symptoms/improvement in symptoms.

Service User Involvement

### Outcomes

Were you aware of the importance of doing pelvic floor exercises prior to your antenatal education?

72% Yes, 28% No

Were you taught pelvic floor exercises during your antenatal classes?

100% Yes

Did you have any problems with your bladder or bowel or any vaginal pressure/discomfort in the first 4 weeks after your baby was born?

45% Yes, 55% No

Do you have any of these symptoms now, 5-6 months post-natal?

15% Yes, 85% No

### Conclusion

- From our sample obtained, everyone who attended antenatal classes were given instruction on the importance of pelvic floor exercises.
- The 85% of women surveyed who were symptomatic at 5/6 months post-natal received appropriate advice/exercises and one to one appointments.
- Achieved aims of project. The key role of the physiotherapist in pelvic floor education in the antenatal period.

Southern Health and Social Care Trust Physiotherapy Service  
 Project Name: Antenatal Education: Pelvic Floor Exercises in the Postpartum Woman  
 Project Lead: Clare Monaghan, Physiotherapist, SHSCT

**Figure 3.** Poster: "Review of antenatal education: pelvic floor exercise in the postpartum woman".

- (2) “Were you taught your PFEs during the antenatal classes?” Yes: 100%.
- (3) “Did you have any problems with your bladder or bowel, or vaginal pressure/discomfort in the first 4 weeks after your baby was born?” Yes: 45%; no: 55%.
- (4) “At 5–6 months postnatal, do you have any of these symptoms now?” Yes: 18%; no: 82%.

The 18% of the sample who were experiencing issues with regard to stress incontinence were either attending one-to-one physiotherapy, or on the waiting list and awaiting an appointment. Others had received advice on PFEs and fluid volume management, and had sufficient knowledge to self-manage. In conclusion, women’s health physiotherapists have a key role to play in antenatal education. This should include: educating women about the anatomy of the pelvic floor, how pregnancy and childbirth can affect the PFMs, and PFEs; and providing advice about how to get the necessary postnatal referral to the authors’ service, as required. The aim is to ensure that these women have a healthy pelvic floor during the postpartum period and the years to follow.

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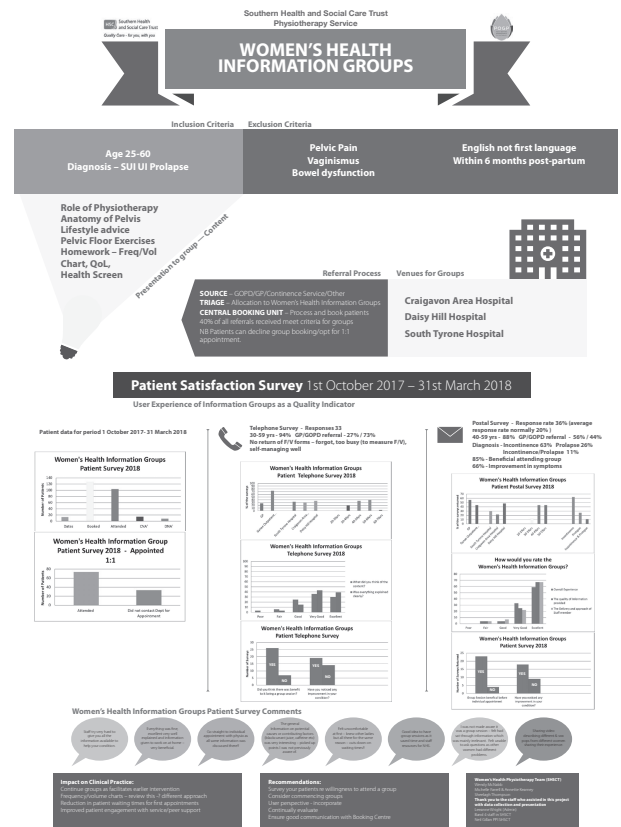
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**Women’s health information groups: user experience of information groups as a quality indicator**

Women’s health information groups were launched in the SHSCT in November 2015. These are delivered by clinical specialists in



**Figure 4.** Poster: “Women’s health information groups: user experience of information groups as a quality indicator”.

women’s health in the physiotherapy departments of three different hospitals. A formal evaluation of the groups that were held between October 2017 and March 2018 was conducted. The aims of the groups were fourfold: (1) patient peer support through education/awareness; (2) education of patients on the management of continence/prolapse; (3) facilitation of improved engagement by patients; and (4) reduction in the loss of clinical time when patients DNA. Two patient satisfaction surveys were conducted: a postal survey of patients who attended groups/came for follow-up one-to-one treatment; and a telephone survey of patients who went to the groups, but DNA their follow-up appointments. General data were collected in both surveys, including age, referral source, diagnosis and department attended. The response rate for the postal survey was 36%, and of these patients, 63% and 26% had diagnoses of incontinence and prolapse, respectively, and 11% reported suffering from both incontinence and prolapse. Eighty-five per cent of the telephone survey group reported that attending a group had been beneficial, and 66% stated that they had experienced an improvement in their symptoms after implementing the advice that they had been given and commencing the



exercise programme. Patients contacted for the telephone survey had not requested a follow-up appointment for a number of reasons; for example, they had forgotten about it, had been too busy or were self-managing well after attending the group. On review of the results, the authors decided to: (1) continue with the groups since these facilitate earlier intervention; and (2) re-design the frequency–volume charts given out to make completion easier. There was a reduction in patient waiting times for first appointments and improved patient engagement with the physiotherapy service, and peer support was reported by the participants. In conclusion, clinicians should ask patients about their willingness to attend a women's health information group, consider commencing such groups, incorporate user perspectives and continually evaluate the process.

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## Evaluating the use of a drop-in “pregnancy pain clinic” for antenatal women with pregnancy-related musculoskeletal symptoms

As part of the UK National Health Service's 10-year plan, there has been a nationwide focus on improving access to pelvic physiotherapy services. In Nottingham, service models have been developed to support SR and improved access. The “physio direct” model includes telephone SR with triage to either a one-to-one appointment, advice given over the telephone or an appointment in a group session. This led to an increase in the number of referrals that has made meeting the clinical demand within operational constraints challenging. Patient feedback identified issues with regard to waiting times. To meet the increased clinical demand and ensure quick

## EVALUATING THE USE OF A DROP-IN ‘PREGNANCY PAIN CLINIC’ FOR ANTENATAL WOMEN WITH PREGNANCY-RELATED MUSCULOSKELETAL SYMPTOMS.

Authors: **Linsey Hussey** and **Kate Stower**. July 2019

### BACKGROUND

There has been a national focus on improving early access to pelvic health physiotherapy as part of the NHS long-term plan<sup>1</sup> to ensure women have the support they need to tackle issues early<sup>2</sup>.

In Nottingham, service models have been developed to support self-referral and improved early access to pregnancy pain clinic services which include telephone self-referral with telephone triage to either one-to-one appointment, advice over the telephone or an appointment in a group session.

An increased number of referrals led to challenges with meeting the clinical demands within operational constraints and new ways of working were needed. To meet the increased clinical demands and ensure quick access a drop-in clinic was developed.

### AIMS

To deliver and evaluate a quick-access drop-in antenatal musculoskeletal service in which patients are triaged face to face by a physiotherapist and provided with appropriate management strategies.

### METHODS

The drop-in clinic was implemented in 2018 in the physiotherapy outpatient department on the City Campus at Nottingham University Hospitals NHS Trust.

Obstetric patients attended on a nominated day without any appointment and were triaged by a physiotherapist to receive intervention on the day of either:

**A:** One-off education/advice/practical strategies with exercise in a group setting.

**B:** One-to-one “hands-on” assessment and treatment.

Each drop in clinic lasted a total of 2 hours.

The clinic was promoted by email to all hospital and community based midwives and at community midwifery meetings. Details of how to access were recorded on the service answer phone and printed in all patient hand-held maternity records.

After 7 months a retrospective service evaluation was undertaken of clinical contacts (Fig. 1), staffing levels and patient feedback (Fig. 2 and Fig. 3).

### COMMENTS FROM PATIENT FEEDBACK FORMS

“Everything was explained clearly and I understand why I have the pain that I have.”  
“In group session it helped to hear others going through the same issues. I'm not on my own!”  
“The drop in clinic is a fantastic way to access exercises quickly. Much better than my wait last time”

### CONCLUSION

The drop-in clinic offered a time efficient way of triaging and assigning a pathway of treatment to antenatal patients with musculoskeletal problems in Nottingham.

Uptake may be good due to positive pre-existing links with the community midwifery teams, GPs and hospital obstetric teams.

It's hypothesised that now capacity allows patients to be seen quickly, they're often seen earlier in pregnancy. This may result in patients presenting with milder symptoms meaning deterioration is prevented. It's possible that acute and severe symptoms are more effectively managed due to immediate access to one-to-one treatment for those in need of it.

Possible further work in this area could be to audit the new to follow-up ratios for the patients that attended prior to the development of the clinic in 2018 compared to patients attending the clinic.

### REFERENCES

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- <https://www.nhs.uk/longtermplan/2019-24-our-ambitions-for-our-nhs/>

### RESULTS

From July 2018 to Jan 2019 218 patients attended the clinic. An average of 4-11 patients attended per week (Fig. 1). From September 2018 onwards over half of the patients were triaged as being suitable for the group session. Staffing levels varied from a minimum of 2 qualified and one assistant to a maximum of 3 qualified and one assistant.

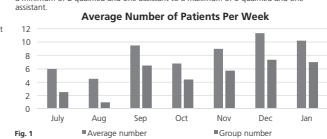


Fig. 1 Patient feedback identified a high level of patient satisfaction (Fig. 2). Pre clinic complaints were largely regarding service access, no complaints have been received since the clinic started.

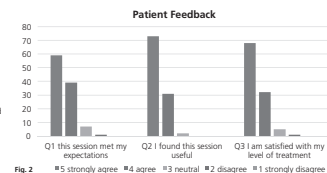


Fig. 2 65 COMMENTS OVERALL FROM 113 FEEDBACK FORMS

12 of which had suggestions to help improve service.  
1 person felt she needed more than was offered.  
1 person felt she got less out of a group session because she didn't want to discuss her medical history.  
51 purely positive comments

Fig. 3

**Figure 5.** Poster: “Evaluating the use of a drop-in ‘pregnancy pain clinic’ for antenatal women with pregnancy-related musculoskeletal symptoms”.

access, a drop-in clinic was developed. Obstetric patients attended without an appointment on a nominated day. They were triaged by a physiotherapist to receive immediate intervention in the form of either:

- (1) a one-off session consisting of education, advice and practical strategies, and exercise in a group setting; or
- (2) one-to-one, hands-on assessment and treatment.

After 7 months, a retrospective evaluation was undertaken of clinical contacts, staffing levels and patient feedback. An average of eight patients were seen during each session by a maximum of three qualified physiotherapists and one assistant. The responses on the patient feedback questionnaires were positive. No complaints had been received since the clinic started. The drop-in clinic offered a time-efficient way of performing triage, and assigning a pathway of treatment to antenatal patients with musculoskeletal problems. Uptake may have been good because of pre-existing links with community midwifery teams. The capacity of the drop-in clinic now allows patients to be seen quickly and often

earlier in pregnancy. This could result in patients presenting with milder symptoms, which would mean that deterioration can be prevented more easily. It is also possible that acute and severe symptoms are more effectively managed as a result of immediate access to one-to-one treatment for those in need of it. The pregnancy pain clinic has been successful in providing obstetric patients with quick access to musculoskeletal physiotherapy, and generated positive patient feedback.

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**The reliability of measuring diastasis recti abdominis in pregnant women using ultrasound**

Ultrasonography is a non-invasive, repeatable and safe method of measuring diastasis recti abdominis in pregnancy. The aim of this study was to determine the intra-rater and inter-rater reliability of determining diastasis recti in pregnant women with the use of an ultrasound machine. Ultrasound imaging was used to measure diastasis recti abdominis in 20 pregnant volunteers. Two physiotherapists performed measurements 4.5 cm above and below the umbilicus, as well as with the participants in a relaxed abdominal wall position or performing an abdominal crunch. The reliability was assessed by the intraclass correlation coefficient (ICC). The intra-rater reliability for measurements above the umbilicus in both testing positions varied from

**THE RELIABILITY OF MEASURING DIASTASIS RECTI ABDOMINIS IN PREGNANT WOMEN USING ULTRASOUND**

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**Background**

Diastasis recti abdominis is defined as an increased separation of the two rectus abdominis muscles above the linea alba.

Ultrasonography is a reasonably priced, non-invasive, repeatable and safe method for measuring the excessive separation in pregnancy.

The obtained values are in millimeters; however, such changes cannot be detected by palpation.

**Measurements**

Measurements were made using an ultrasound machine Samsung Medison UGEO HDI and a linear ultrasound probe (Figure 2).




Figure 2: Ultrasound image of diastasis recti abdominis measurement.

**Conclusions**

Ultrasonography is a reliable method to assess diastasis recti abdominis in pregnant women if the measurements are taken by a single physiotherapist (intra-rater reliability) or by two different physiotherapists (inter-rater reliability).

**Limitations**

A narrow ultrasound transducer was considered as a limitation to our study. Therefore, only measurements on smaller CRAs were conducted.

Inconsistency of measuring the instructed position during measurement acquisition was as well a limitation to our study. An alteration in foot placement in the supine resting position may have significantly influenced study outcomes.

**Aims of the study**

To determine the intra-rater and inter-rater reliability in measuring diastasis recti abdominis in pregnant women with the use of an ultrasound machine.

Study type: longitudinal clinical measurement.

This is, to the best of our knowledge, the first study to evaluate the intra and inter-rater reliability of ultrasound RD measurements on pregnant women.

**Results**

The intra-rater reliability above the umbilicus in both positions was very good, where ICC ranged from 0.91 to 0.97 (Table 1).

The intra-rater reliability	
Position/transducer location	ICC value
Relaxed SU	0.976
Rater 1	0.924
Rater 2	0.999
Abdominal crunch SU	-5.170
Rater 1	0.918
Rater 2	0.951
Abdominal crunch IU	0.538
Rater 1	0.587
Rater 2	0.507

\*SU - supine resting position, IU - supine resting position with abdominal crunch, ICC - intraclass correlation coefficient.

**Participants**

We included 20 pregnant volunteers to participate in this study.

The participants were eligible for the study if they agreed to participate in two testing sessions and signed an informed consent prior to measurements.

The inclusion criteria were:

- female sex,
- pregnancy
- general wellbeing

The exclusion criteria for this study were:

- pregnancy-related complications,
- poorly visible borders of the rectus abdominis muscles,
- width of the linea alba that was greater than the ultrasound transducer

**Methods**

Two physiotherapists performed measurements:

- 4.5 cm above the superior border of the umbilicus (Figure 1) and
- 4.5 cm below the inferior border of the umbilicus




Figure 1: Measurement of diastasis recti abdominis above the umbilicus.

RD images were obtained with participants in a supine resting position (knees bent at 90°, feet resting on the table) and while performing an abdominal crunch (participants aligning the body) and during an abdominal crunch.

The abdominal crunch was started from the resting position on an examination. Participants were instructed to raise their head, shoulders, and arms upward until their shoulder blades touched the table.

**Take away message**

- The intra-rater reliability ranged from moderate to very good.
- The inter-rater reliability was good in both testing positions and both measurement locations.
- The study is a promising higher reliability as experience and continuous professional education.
- The present study is unique, since it is the first study that conducted ultrasound measurements of the CRA on pregnant women.

**Take away message**

Further research is required to investigate the reliability of ultrasound imaging on larger diastases and to investigate the impact of ultrasound imaging training on the reliability of the results.

**Acknowledgements**

The authors would like to thank the subjects studied and members of the Research Group of the University Medical Centre of Ljubljana, for helping us with access to the ultrasound machine.

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**Figure 3**

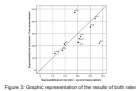


Figure 3: Scatter plot showing the reliability among raters (Rater 1 vs Rater 2) in measurements above and below the umbilicus. The plot shows a strong positive correlation, indicating high reliability between the two raters. The ICC values were good (ICC=0.62-0.75).

**Figure 6.** Poster: “The reliability of measuring diastasis recti abdominis in pregnant women using ultrasound”.

0.91 to 0.97. In measurements below the umbilicus, the first rater recorded ICC scores ranging from 0.53 to 0.59. The second rater documented values of -5.17 and 0.90, respectively, for measurements conducted with the participants in a relaxed abdominal wall position or performing an abdominal crunch. The ICC values among the raters for measurements in a relaxed abdominal wall position varied between 0.62 and 0.69. The ICC score while performing an abdominal crunch was 0.75 both above and below the umbilicus. The intra-rater reliability above the umbilicus in both positions was very good. In measurements below the umbilicus, the reliability was average to very good. Reliability among the raters in measurements above and below the umbilicus, and in both positions was good. In conclusion, ultrasonography is a reliable method of assessing diastasis recti abdominis in pregnant women.

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