Psychological impact of Polycystic Ovary Syndrome (PCOS)

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Today: 5 things to ponder ...

1. PCOS is complex & impacts across many domains
2. Clinical features increase the adverse risk profile for other complications
3. High rates of anxiety & depression
4. Consideration of overall HRQOL
5. Importance of conducting psychological assessment
Different criteria make for confusing times & impacts on research findings

<table>
<thead>
<tr>
<th>NIH Criteria</th>
<th>Rotterdam Criteria</th>
<th>Androgen Excess/ PCOS Society</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both:</td>
<td>≥2 of:</td>
<td>Both:</td>
</tr>
<tr>
<td>- Chronic anovulation</td>
<td>- Chronic anovulation</td>
<td>- Ovarian dysfunction and/or polycystic ovaries</td>
</tr>
<tr>
<td>- Hyperandrogenism (clinical or biochemical)</td>
<td>- Hyperandrogenism (clinical or biochemical)</td>
<td>- Hyperandrogenism (clinical or biochemical)</td>
</tr>
<tr>
<td></td>
<td>- Polycystic ovaries</td>
<td></td>
</tr>
</tbody>
</table>

*Dumesic et al. Endocrine Rev. 2015;36(5): 487-525*
Complexity & impact

- Clinical features associated with PCOS including high androgen levels, acne, excess body and facial hair, scalp balding, obesity, and menstrual irregularity impact physical & emotional health
- Infertility
- Risk of future health problems
- High incidence of anxiety & depression
- Economic burden both personal & societal
- All of this on ability to make lifestyle changes
Jane and her story
Psychological impact

• Time to diagnosis >12m
• Experience of diagnosis dissatisfying for 49%
• Less confident to:
  o get information
  o manage the disease
  o make lifestyle changes
• Body image
Psychological function: anxiety

Women with PCOS have:

1) Increased prevalence of anxiety
   PCOS women=34-57%; General population=18%

2) Increased severity of anxiety at clinically moderate to severe levels

3) Impaired quality of life if anxiety and/or co-morbid anxiety and depression are present (with a potential association of acne and infertility)

ABS 4326.0, 2007; Benson 2009; Cinar et al, 2011; Deeks et al 2010; Deeks et al 2011; Dokras et al 2011; Laggari et al 2009; Moran et al 2012
Depression & PCOS

- Increased prevalence: 28-64% compared to 7% in women without PCOS
- Increased severity of depression and high conversion to depression
- Diagnosed with infertility also more likely to be depressed

## Hospital Anxiety & Depression Scale

<table>
<thead>
<tr>
<th>Mood disorder</th>
<th>With PCOS (%) n=177</th>
<th>Without PCOS (%) N=109</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anxiety</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘Normal’</td>
<td>31</td>
<td>59</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Mild</td>
<td>32</td>
<td>31</td>
<td>0.94</td>
</tr>
<tr>
<td>Moderate</td>
<td>28</td>
<td>8</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Severe</td>
<td>10</td>
<td>2</td>
<td>0.007</td>
</tr>
<tr>
<td><strong>Depression</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘Normal’</td>
<td>72</td>
<td>90</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Mild</td>
<td>15</td>
<td>6</td>
<td>0.01</td>
</tr>
<tr>
<td>Moderate</td>
<td>12</td>
<td>5</td>
<td>0.03</td>
</tr>
<tr>
<td>Severe</td>
<td>0.6</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Deeks et al 2011, Human Reproduction
Fertility & PCOS: setting the scene for psychological impact

Adverse reproductive profile - menstrual irregularity, compromised fertility, higher risk of miscarriage and pregnancy induced hypertension, preeclampsia & GDM

- Higher risk of preterm birth, perinatal mortality, postnatal hospitalisations, adverse health outcomes for babies (Doherty et al 2015)
- Women with NIH PCOS had poorer infertility related QOL compared to non NIH PCOS (Increased miscarriage and adverse obstetric outcomes) (Moran et al 2012)
Fertility & PCOS: frustration, loss, mood changes

Women with PCOS less likely to use contraception and more likely to be trying to conceive

• BMI independently associated with pregnancy loss in overweight and obese groups (Joham et al 2014)

• PCOS women more likely to have infertility treatment than non PCOS women (Joham et al 2014)

• Greater use of fertility hormone treatment in women with PCOS but IVF use similar to non PCOS (Joham et al, 2015)
Obesity & PCOS: setting the scene for psychological impact

• Increased adiposity exacerbates reproductive & metabolic features (Moran et al 2009; 2012)

• Weight loss improves the presentation of PCOS regardless of dietary composition (Marzouk et al 2015; Moran, Koh et al 2013)

• Worsened HRQoL, anxiety & depression related to BMI and weight for NIH PCOS (Moran et al 2010; Moran et al 2012)
Psychological function & obesity: the many ways to look at it...

- Psychological implications including anxiety, depression, social dysfunction and worsened QOL higher in overweight women (Wadden et al 2006) and decrease following weight loss (Moran et al 2006)
- Importance of mood as a predictor of weight loss
- Mood and emotional eating
- Body image...
Women with PCOS have higher body dissatisfaction scores than women without PCOS which seems to be associated with higher depression scores and greater BMI

(Deeks 2010; Deeks et al 2011; Himelein & Thatcher 2006)
Body Image: Women with and without PCOS

MBSRQ Subscales

- Appearance Evaluation
- Health Evaluation
- Fitness Evaluation
- Body Areas Satisfaction
- Weight Preoccupation
- Fitness Orientation
- Health Orientation
- Appearance Orientation

Mean Score

Without PCOS

With PCOS

*p<0.0001

Deeks et al 2011, Human Reproduction
PCOS Body Image: BMI<27 and BMI>27

MBSRQ Subscales

p=.001*
p<0.0001**

Deeks et al 2011, Human Reproduction
Self-efficacy & PCOS

- Less confident to seek help and support
- Those with increased BMI less confident in ability to manage disease or participate in social activities
PCOS Self Efficacy: BMI<27 and BMI>27

Deeks et al, ASBHM conference 2010
Perceptions of risk

With PCOS

Without PCOS

Obesity MS PreDM GDM DM2 Infertility

p=0.01

p=0.02

p<0.001

Moran, Gibson-helm, Teede & Deeks, 2010
Fears about future health

- Weight gain
- No more children
- Loss of femininity
- Loss of sexuality
- Heart disease
- Infertility
- Diabetes

With PCOS: p < 0.05, p = 0.03, p < 0.003
Without PCOS: p < 0.02

Moran, Gibson-helm, Teede & Deeks, 2010
PCOS & sexual function

Clinical features tend to be associated with changes to sexual function in some studies

- Women with PCOS more likely to evaluate themselves as worse for arousal, lubrication, satisfaction, pain and total sexual function than controls (Benetti-Pinto et al 2015) and more negatively as sexual partners (Kowalczyk et al 2015)
- Not as negative in lean PCOS women (Morotti et al 2013)
- Unpublished – No difference for sexual feelings, responsivity, libido and partner problems, however PCOS women (n=168) more likely to report dyspareunia (p=0.01) and lower frequency (n=96, p=0.05) (Deeks et al…) than non PCOS women.
So where are we up to?

PCOS can mean:
• Decreased QOL
• Increased prevalence and severity of anxiety and depression
• Greater distress around body image
• Lowered confidence to manage the disease
• Immediate concerns over perceived weight gain and infertility
• Increased psychosocial distress the greater their BMI
• Fears for future health
• Potential changes to sexual function
Confidence in management & treatment

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Extremely Confident</th>
<th>Very Confident</th>
<th>Moderately Confident</th>
<th>Slightly Confident</th>
<th>Not at all Confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Therapy</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Improve symptoms</td>
<td>26</td>
<td>26</td>
<td>27</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Weight loss</td>
<td>40</td>
<td>25</td>
<td>25</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Prevent complications</td>
<td>30</td>
<td>31</td>
<td>28</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Lifestyle Changes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve symptoms</td>
<td>7</td>
<td>16</td>
<td>25</td>
<td>35</td>
<td>17</td>
</tr>
<tr>
<td>Weight loss</td>
<td>7</td>
<td>15</td>
<td>25</td>
<td>34</td>
<td>19</td>
</tr>
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<td>Prevent complications</td>
<td>9</td>
<td>19</td>
<td>34</td>
<td>28</td>
<td>11</td>
</tr>
</tbody>
</table>
Management & treatment options

Good mental health will aide management

Mental health plan approved strategies:

- Psycho-education
- Motivational interviewing
- CBT
- Solution focused therapy
Learn about anxiety

Everyone worries and has anxious feelings at some time in their life. This may be when you are young, when you are trying to get pregnant, when you are menopausal or when you are managing a chronic illness.

How do you know when your worries or anxieties are a problem though? If you are a worrier now does that mean you might end up with an anxiety disorder later? How do you know if you need to get help?

These are important questions. This website has been developed to help you understand more about worry, anxiety and anxiety disorders at different times in your life.

Your life stage
Sometimes it is hard to know if what you are feeling is worry, anxiety or an anxiety disorder. You may already know you are an anxious person or perhaps someone has told you that you are a ‘worrier’. To understand more about whether you are worried, anxious or have an anxiety disorder we have included some questions for you to ask yourself.

Start by asking yourself the following 3 questions. Depending on your answers we will then guide you from there.

1. During the past four weeks have you been bothered by feeling worried a lot of the time?
   - Yes
   - No

2. Are you frequently tense, irritable or fearful?
   - Yes
   - No

3. Are these feelings interfering with your daily life?
   - Yes
   - No

SUBMIT
If you have an ongoing illness and you also have worries and anxiety, you have come to the right place. The type of illness you have, and the treatments you might need can cause you to worry and be anxious. If your symptoms interfere with your daily life and are a constant reminder that your life has changed or you can’t live the way you would like to, stress and anxiety can increase. Many other things will add to worry and anxiety also, like how long you have had a diagnosis for your illness, how much pain you are in and whether you have support around you.

Explore the following pages to learn more about anxiety and worry, think about how anxiety affects you and find ways to help with worry and anxiety. Below are the definitions for worry, anxiety and anxiety disorders. See if one sounds more like you. If you are unsure if you have anxiety or worry, go to our **self-assessment pages** to explore your thoughts and feelings further.

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**Chronic illness**

Professor Jane Fisher, Jean Hailes Professor of Women’s Health at Monash University and Dr Mandy Deeks, Psychologist have a conversation about anxiety and worry in women who are managing an ongoing illness.
Find the right tool to help you

Once you have explored the causes of your worry then it is time to do something. Knowing what caused you to worry is the first step. While you may not always be able to change the cause of your worry there are many things you can do to help you feel better.

You will find there are some tools that work for everything on the anxiety scale - worry, anxiety and anxiety disorders. Some tools work when you are simply feeling a bit unsettled and some work if you are feeling completely undone.

Maybe one tool will suit you more than another and sounds like it is something you would like to try, or maybe there are several tools you can try. You don’t have to try them all. Choose the tools that feel right for you.

Choose any of the toolkits below or on the right that you want to learn more about.

1. The basics
2. Talking
3. Creating
4. Knowledge is power
5. Tackling the issues
6. 15 Minutes a day
7. Accept, rather than fight anxiety
8. Relaxation & Mindfulness
9. Cognitive Behavioural Therapy (CBT)
10. What are you thinking?
11. Thinking record
12. Connect
13. Score your anxiety out of 10
14. Who to see and what type of therapy to have
15. Helpful contacts
Take home

- Confusing
- Complex
- Controversial
- Costly
- Compromising
- Requires great care

Please remember the psychological