

# P684 - A symptom level exploration of the PHQ9 in a UK cancer setting: Which is the optimal single question that predicts DSMIV major depression?

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**OBJECTIVES** There is considerable interest in developing ultra-short methods of screening consisting of one or two items. There is also interest in having shorter case-finding methods (Zimmerman et al, 2010). The Patient Health Questionnaire (PHQ) is a relatively simple 9 item self-report tool focusing on the DSMIV symptoms of depression. It is often abbreviated into the PHQ2. However the validity of the PHQ2 compared to other simple combinations of questions has not been previously studied in oncology.

**METHODS** We analysed data collected from Leicester Cancer Centre from 2008-2009 involving approximately 600 people approached by a research nurse and two therapeutic radiographers. The researcher asked patients to self-complete the PHQ9. We collated full data on 460 patient assessments of whom 12.9% had MDD and 14.8 were from ethnic minorities (largely British South Asian of India descent).

**RESULTS i. Single Items**

A logistic regression suggested items 1,2,5,6 and 7 were most influential in DSMIV MDD.

Sensitivity, specificity and AUC were as follows:

Q1 –	81.5%;	91.2%;	0.884 [interest]
Q2 –	81.2%;	96.2%;	0.887 [depression]
Q5 –	76.6%;	81.5%;	0.790 [appetite]
Q6 –	68.7%;	95.4%;	0.821 [self-esteem]
Q7 –	73.4%;	91.9%;	0.832 [concentration]

Thus in this sample the optimal single item was the depression question, followed by the interest question.

**RESULTS ii. Combination Items**

Next we analyzed conjoint questions with two items focusing on those.

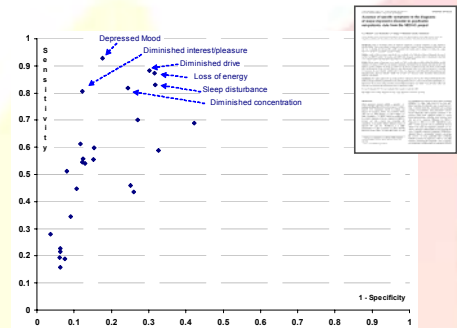
Sensitivity, specificity and AUC were as follows

Q1orQ2 –	100%;	92.2%;	0.960 [interest or depression]
Q2orQ5–	100%;	78.9%;	0.895 [depression or appetite]

**CONCLUSIONS** In fairly large sample the optimal simple questions to detection DSMIV MDD appears to be Q1orQ2 > Q2orQ5 > Q2 alone > Q1 alone. Notably the first two combinations achieve 100% sensitivity.

**CLINICAL IMPLICATIONS** It may be possible to use Q1 and Q2 (that is PHQ2) in diagnosing MDD according to DSMIV with very high sensitivity and good specificity.

Zimmerman M, Galione JN, Chelminski I, et al. A simpler definition of major depressive disorder. *Psychol Med.* 2010 Mar;40(3):451-7. Epub 2009 Jul 23



**Patient Health Questionnaire—PHQ-9**

Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_ Today's Date: \_\_\_\_\_

Fill in the boxes with pen or pencil to mark your answers.

A. Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly every day
	0	1	2	3
1. Little interest or pleasure in doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Feeling down, depressed, or hopeless	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Trouble falling/staying asleep, sleeping too much	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Feeling tired or having little energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Poor appetite or overeating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Trouble concentrating on things, such as reading the newspaper or watching television	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Thoughts that you would be better off dead or of hurting yourself in some way	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Score	_____	_____	_____	_____

