Author's response to reviews

Title: The effect of marital relationship on mental health of women in Pakistan

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Author's response to reviews: see over
Ms Natalie Pafitis  
Executive Editor  
BMC Public Health  
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236 Gray's Inn Road  
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Subject: Covering Letter for the Manuscript titled ‘The association of marital relationship and mental health of women in Pakistan.’

Dear Ms Natalie Pafitis

We thank you for letting us to revise our manuscript based on very helpful critical comments of the two reviewers. We are confident that the revised MS is to the satisfaction of the two reviewers and the editorial team. Point-by-point responses to the points raised by the two reviewers are given below. Within the response, we have not altered the references which were picked from the MS by the reviewers and they are still presented in a number format (eg. [85]). However, we have also used few references to justify our responses and we have used the format of Author-date.

We hope to hear positive response very soon

Yours Sincerely

Girmay Medhin  
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RESPONSE TO REVIEWER 2: ROZINA KARMALIANI

Minor essential revisions:

1. Please check all numbers of the tools used in this study. There are some numbers missing in sequence. It would help to mention specificity and sensitivity of all the tools. Five or six other than demographic keeps changing

Response: Thank you for your comment. The numbers and the sequence of the tools used in this study are in order now. As for the mention of specificity and sensitivity of all the tools, we have incorporated them for HADS which is approximately 0.80 (Bjelland, Dahl, Haug & Neckelmann, 2002) and SRQ specificity ranges from 72-85% and sensitivity from 73-83% (Harding et al., 1980). The other scales are not screening measures, therefore we have not included the sensitivity and specificity for them also strong convergent and divergent validity for each measure is already mentioned in the paper. Hope this is acceptable.

2. How was sample size reached?

Response: The study participants were selected from the identified small catchment areas which included both rural and urban settings. The source population was identified through governmental lists including voters list and attempts were made to exhaust all households. During the data collection period one urban slum area did not seem cooperative and therefore we could not reach all households in that area. Therefore, all households in the target area which were willing to participate in the study were interviewed. We expected to recruit an adequate sample size for SEM by approaching three areas in Rawalpindi district. We share the notion that SEM is a large sample
technique (usually $N > 200$; Kline, 2005, pp. 111, 178). Therefore, the sample for the present study seemed appropriate. Kindly also see the section on 'Recruitment of study participants'.

3. In results section again the alphabetical numbers for tools results are not in sequence and some in small case and some in upper case.

Response: Thank you for your comment. It is now corrected.

4. Discussion should also focus on how extended family play negative role it is mostly only given unidirectional as support. There is ample literature on depression or suicidal ideation or domestic violence because of family marriages and extended family interference.

Response: Please see response to comment 5 below.

5. Socio-economic risk factor in discussion should discuss gender role, power structure, power dynamics and how women autonomy and women empowerment is a threat in a patriarchal society

Response: Thank you for comment four and five. Our contention here is that most work that is published in countries reporting patriarchal social influence focus on the disadvantage of women and report the negative role played by extended family members. Therefore though we recognize the issues faced by women in our country we wanted to highlight the supportive elements of relationship within the family and with the husband which could have a positive impact on women's well being. For all interventions for
women's mental health the family and husband play a vital role and should be involved. It might help to argue from the positive perspective rather than enhancing the negative impacts. Having said this the background section includes the risk posed to women by detrimental relations with in-laws and husband for CMD and suicidal ideation. We hope this suffices.

6. Under tool justification or limitation one should mention how and why HADS was selected where the population is general and from society or community and the tool is not population based.

**Response:** We understand that HADS was not initially developed for community screening for depression and anxiety. However, recently it has been extensively used and proven suitable for use in the general population in the developed (Gale et al., 2010; Chan, Leung, Fong, Leung & Lee, 2010) and the developing (Abiodun, 1994) countries. The present study used the Urdu translation [51] which has been used in a number of studies to screen for depression and anxiety (Dodani & Zuberi, 2000; Ali, Reza, Khan, & Jehan, 1998; Ali, Rahbar, Tareen, Gui & Samad, 2002).

7. On pg 22 first para need one word deletion for proper read.

**Response:** Thank you for your comment. We have taken out this sentence as this sentence seems to be redundant based on other changes made in the manuscript.

8. Last line we acknowledge has 'e' capital so change it to lower case.

**Response:** Thank you for pointing this out, the sentence now reads as follows:
We are grateful to the study participants for taking out the time to share their valuable and intimate information for us to be able to disseminate it.

9. Some references like 72 have volume not bold so check for consistency in format.

**Response:** Thank you for your comment. It is now corrected.
RESPONSE TO REVIEWER 1: CLAIRE M KAMP DUSH

Minor Essential Revisions

1. There are grammatical errors (such as in the results section of the abstract.)

Please reread the manuscript carefully (out loud helps) and correct grammatical errors.

Response: Thank you for the comment. We have revised the abstract as well as the whole MS for grammatical errors

2. I would probably list “marriage” as a key word instead of “marital relationship”.

Response: We have now used “marriage” as key word replacing “marital relationship”

3. Clarify this sentence “This might allow a greater significant role of the social support in marital satisfaction, adjustment and interaction patterns”. Whose social support?

Response: This sentence explains role of social support from family in Pakistani culture. It has now been rephrased as: It is therefore not surprising that marital issues are shared with family members in hope of support, (Goodwin & Cramer, 2000), giving them a pivotal position in contributing to marital satisfaction, adjustment and interaction patterns for couples (Page 7, para 1, line 7). We hope this makes better sense of the significance of familial role in Pakistani married couples.

4. What are “practice codes”?

Response: Practice codes are the legal and religious rules formally defined by religious and legal authorities such as Quran (the holy book and ordinance of Pakistani
government). We have removed the sentence with practice codes. Therefore the paragraph now begins with the following: There is little empirical evidence of the current state of marital relationships in Pakistan.

5. I think you need to search the manuscript for the word effects and remove all occurrences. These are associations.

Response: Causal inference through SEM is enigmatic and controversial as it has been criticized by many (Holland, 1988; Sobel; 2008) but it is methodologically significant as it is generally interpreted as causal assumptions by others (Pearl, 2010, 2011). There has been disagreement among researchers with reference to the use of the word “cause” while reporting SEM results (Schreiber et al., 2006) particularly from cross-sectional data. We do not aim to establish causal relations from SEM. Rather the SEM model tested in this paper relies upon our causal assumptions. These assumptions derive from the prior studies, scientific knowledge, logical arguments, temporal priorities, and other evidence that we have presented in support of our model. As supported in a recent review by Schreiber, Nora, Stage, Barlow, & King (2006, p.325) which provided guidelines and recommendations on reporting CFA and SEM states “one should simply discuss the direct, indirect, and total effects among latent constructs as dictated by theory or empirically based suppositions”. Therefore the word “effect” used throughout the manuscripts referred to the effect a variable is making in the other variable and tests authors assumptions of causal relation between these variables based on past understanding and strong theory support and must be tested in future with studies employing stronger methodological designs. Having said this we understand that this
comment and majority of the critical comments made by the current reviewer emanate from the cross-sectional design of the study and the interpretation of findings from SEM (traditionally known as causal modeling). We fully share the concerns of the reviewer in interpreting the findings from SEM although the current study bases itself on the familiarity of the authors to the situation on the ground and how martial circumstances actually precede the mental illness of married women in Pakistan. Although the effect in the reverse direction as indicated by the reviewer is theoretically possible, we do not expect this to be the case in the current study. Saying this we have made an effort to address the concerns of the reviewer which were very helpful to improve the quality of the MS. The word effect has now been changed to associations.

Major Compulsory Revisions

1. What does this mean “Although one of the amenable risk factors associated with increased prevalence is marital circumstance, it’s not clear how different aspects of this construct interact.” Clarify.

Response: This sentence was in the background section of the abstract and we have now modified the abstract. Hope the abstract is clearer in the revised MS.

Background: Prevalence for depression and anxiety is reported to be disproportionately high among Pakistani women and marital circumstances have been indicated to be a salient risk factor for Pakistani married women. Social support is a known buffer of psychological distress. However, there is no clear evidence as to how different aspects of marital relations interact and associate with depression and anxiety in the lives of
Pakistani married women and the role of social supports in the context of their marriage. This is a preliminary endeavor in this pursuit.

2. It is impossible to test the “effect” of the marital relationship on mental health. Mental health is associated with who selects into marriage. Perhaps marital quality is low because the woman had poor mental health when she got married. All you are able to do is examine associations.

Response: Thank you for your comment. We agree that the temporal sequence cannot be established ipso facto since it is a cross sectional study and SEM cannot be interpreted as such. However, the argument of the present study is based on the limited research in the area of marital satisfaction and mental health of women where marital circumstances have been associated with common mental disorders (CMD) (Mirza, & Jenkins, 2004; Qadir, De Silva, Prince, & Khan, 2005) and suicidal ideation (Khan, 1998) among women. The women have been reported to have disproportionately higher prevalence of depression compared to other developing countries (Qadir, Khan, Medhin, & Prince, 2011). It might still be rightly argued that the direction under the present study cannot be reported. Having said this, the co-occurring relationship between marital distress and depression has been well documented (Fincham, Beach, Harold & Osborne, 1997) and appears to exist across all age groups (Cotton, 1999). Depression and anxiety among women has long been recognized as public health problem. In recent years a case for marital distress as a public health problem has also been made (Miller, 2000). Besides it might also be noted that marriage is a sine qua non in Pakistan and most women adhere to it, so it would be hard to argue that only the high risk women would
select into marriage. It could however, be argued that women are susceptible to CMD across cultures, more so in Pakistan and therefore could be at an increased risk of succumbing to the co-occurring relationship between marital distress and CMD. Furthermore longitudinal studies have ascertained temporal sequence of relationship between marital relationship quality and depressive symptoms where distress in marriage precedes depression this was particularly true for women (e.g. Fincham, Frank D., Steven RH Beach, Gordon T. Harold, and Lori N. Osborne, 1997).

3. Change the title so that the term “effect” does not appear.

**Response:** Thank you for the comment. The title now reads as follows: "The association of marital relationship and perceived social support with mental health of women in Pakistan."

4. You say “Factor structures of five scales investigated in the current study were similar to the structure reported in the literature.” In what literature are you discussing? The US literature?

**Response:** We have now rephrased this sentence kindly see the response to comment 5. The studies supporting the factor structure have been discussed in detail in the discussion section. The support for different scales comes from different studies conducted both in the developed and developing countries.

5. I cannot tell what the results were from the abstract.

**Response:** The section explaining the main results is rephrased.
Overall the factor structures of MSPSS, CSI-4, LWMAT, RDS and HADS were similar to the findings reported in the developed and developing countries. All models were relatively well fit to the data. In our study perceived higher social support reduces the likelihood of depression and anxiety by enhancing positive relationship as reflected by a low score on the relationship dynamics scale which decreases CMD symptoms.

Moreover, perceived higher social support is positively associated with marital adjustment directly and indirectly through relationship dynamics which is associated with the reduced risk of depression through the increased level of reported marital satisfaction. Nuclear family structure, low level of education and higher socio-economic status were significantly associated with increased risk of mental illness among married women.

6. This sentence makes me assume you are collecting data from both members of the couple, which I do not believe is the case. “This is to say that the unit of analysis for marital satisfaction is individual and the unit of analysis for marital adjustment is couple or the relationship”.

Response: The sentence now reads as follows: Furthermore, evidence indicates that marital adjustment even when reported by one partner indicates the perceived adjustment of the couple within the institution of marriage whereas marital satisfaction is the individual's own personal contentment within the relationship (Chung, 1990). In our study the respondent reported marital adjustment as mutual interaction of the spouses, and for marital satisfaction they reported their subjective experiences.
7. These sentences (“In Pakistan conflict in marital relations is one of the common reasons for distressed and depressed women approaching mental health care services [10] and it is one of the most frequently studied phenomena in the field of family and relationships [11].” and “In Pakistan, rates of depression and anxiety are disproportionately high among women [3, 4]. The total mean prevalence of depression and anxiety in Pakistani community is 34% (29-66% for women and 10-33% for men) [3]. Factors reported to be associated with these rates among women are middle age, low level of education, living in rural area[5,3,6] financial situation[3]; marriage related relationship difficulties[3,4]; marital satisfaction [7,8,6]; and marital adjustment [9].”) makes it seem like this issue has been studied previously. I need more details about the results of previous research in Pakistan before I can adequately judge the merits of this paper.

**Response:** We have rephrased the above paragraph to better illustrate our point of view. All the references mentioned above are from peer reviewed journals and are available online. It should be mentioned that to our knowledge none of these variables have been studied previously as hypothesized in the present study. Neither has the interaction pattern been examined using SEM. There is paucity of research in the field of mental health in Pakistan. However, the few studies that have been conducted have repeatedly reported that women have disproportionately higher rates of depression and anxiety compared to other developing countries (Qadir et al., 2011, Jenkins 2004). Relationship and adjustment problems with husband and in-laws have been associated with attempted suicide (Khan, 1999) as well as common mental disorder (CMD) (Niaz, 2004.). One study examining marital dissatisfaction and its relation to mental health reiterated the
high rates of CMD among married women and attributed it to the women's perceived dissatisfaction from their marriage (Qadir et al., 2005).

8. Hypotheses?

**Response:** The hypotheses are now stated as:

It is hypothesized that the increased marital satisfaction and adjustment enhances mental health of women and high levels of negative interactions can reduce marital adjustment, satisfaction and elevates the risk of Common Mental Disorder (CMD). It is also hypothesized that social support will protect against mental health problems by enhancing marital satisfaction and adjustment and by helping to reduce negative interactions in marital relation.

9. There was very little theory in the background section. There are several theories related to this area.

**Response:** We have now added more detail. “The present study therefore hinges on a combination of two theoretical approaches in an attempt to study three distinct constructs of marital relations and to examine their interplay within the Pakistani cultural context. The first distinguishes between marital satisfaction and adjustment as distinct components of marital relations using intrapersonal and interpersonal distinction (Burr, 1970; Burr, 1971). In this approach marital satisfaction is identified as an internal subjective characteristic of a person (Collard, 2006; Schumm & Bugaighis, 1985), and marital adjustment is considered to have dyadic properties referring to the interactions between spouses.
The second approach identifies relationship dynamics specific to negative patterns of interactions such as arguments that contribute to the quality of marital relations (Gottman, 1990). Combining these two approaches helps to develop a framework which proposes that being satisfied and/or well adjusted in a marriage does not mean absence of negative interactions and that if these negative interactions reach a certain threshold they could adversely contribute to the interpersonal adjustment within marriage which may decrease marital satisfaction. The resultant framework is expatiated below.”

10. The sample is a select sample. The age range is wide, and it was not a random sample.

Response: This study only claims to be a small cross section of the community sample, and the sample like you mentioned was a select sample. The restricted resources did not allow us to pursue a prospective approach. There is paucity of research in the field of mental health to begin with and marital circumstances though an integral part of the socio-cultural milieu of Pakistan do not receive much attention. This study is an attempt to move forward so we are in a better position to endeavor into more robust studies.

As for the age range; there has been a debate on how marital satisfaction and adjustment change over time. It is however, widely accepted by researchers and clinicians that satisfaction follows a U shaped trajectory a pattern of early decline followed by a leveling out during the parenting years and an improvement when children leave home (Van Laningham, Johnson and Amato, 2001). Conversely other patterns of change in marital happiness relatively change little across the life span. It therefore made sense to retain the wide age range of the participants in the current work.
11. I think you need to include the items in the scales (or put it in a table).

**Response:** Unfortunately it is unclear from your comment here which scale you are referring to. With the exception of LWMAT all other scales have been previously translated in Urdu. It is beyond the scope of our work to publish those scales. For LWMAT it will be made available to those who request for future research purposes.

12. The authors need to be careful about causal inference. For instance, the authors say “perceived higher social support positively affects marital adjustment directly and indirectly through relationship dynamics which will then reduce the risk of depression through increased level of couple’s satisfaction”. Less depression could lead to higher social support which could lead to increased satisfaction. Depressed individuals tend to withdraw, if the person is not depressed, they probably have more opportunities to receive social support, hence increasing their relationship quality. Hence, because reciprocal associations are a possibility in this study, all causal language needs to be removed. These are only associations.

**Response:** We agree with reviewer’s comments about limitation of drawing causal inferences and possibility of reciprocal relationship of social support and depression. Hence all causal inferences are rephrased as associations.

13. You have the same problem in the discussion. You could also say that lower depression protected against lower marital satisfaction. Again, be very careful how you discuss these results.
Response: All causal inferences are rephrased as associations.

14. I don’t understand how the results support these comments “The SEM model in figure 5 shows that the process of marital adjustment affects level of satisfaction of married Pakistani women. This also supports previous conclusion [81] that marital satisfaction is a separate construct that is an outcome of marital adjustment.” I do not think it is possible to draw this conclusion with cross-sectional data.

Response: The conclusion is rephrased as an association rather than causation and the sentence “This also supports previous conclusion [81] that marital satisfaction is a separate construct that is an outcome of marital adjustment” is deleted.

15. There is so much reported in the discussion of this paper that it is hard to establish what the most important, critical points are.

Response: The most important and critical points are highlighted in the beginning of the discussion section. Each point is further elaborated in the subsequent sections.

1. Is the question posed by the authors well defined? Yes, for the most part.

2. Are the methods appropriate and well described? Yes, for the most part.

3. Are the data sound? The data have limitations, but seem sound.
4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Yes

5. Are the discussion and conclusions well balanced and adequately supported by the data? No.
   
   **Response:** Hope our revisions have now addressed the previous concerns.

6. Are limitations of the work clearly stated? Somewhat.
   
   **Response:** Kindly see the revised limitations section. The present study has important implications for marital relations, perceived social support and mental health of Pakistani married women. However, the results should be interpreted in the light of a few limitations. The cross sectional study design does not allow causal inference therefore prospective research is recommended to establish the temporal link between the above mentioned factors. Our sample size does not allow representation of regional differences. Furthermore, in our study men are not represented which does not permit a gender comparison. It is an essential aspect that needs to be addressed in future research. Having said this, the study is an essential first step in shedding light on important aspects to be looked at for improving mental health and marital satisfaction of Pakistani women.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? They did not clearly acknowledge the work upon which they are building, particularly the other Pakistan work.
Response: Hope that the revised MS will be satisfactory. To the best of our knowledge the interplay of marital relations and mental health of Pakistani women has not been previously examined in such detail. As mentioned earlier marital problems both with husband and in-laws as well as marital dissatisfaction have been reported as risk factors for CMD and suicidal ideation in previous research from Pakistan this includes a meta analysis on Pakistani population (total of 20 studies; 19 were cross sectional and one was case control). These studies have been referenced in the manuscript.

A list of the referenced studies within the response to reviewers and published in peer reviewed journals are provided below:


8. Do the title and abstract accurately convey what has been found? No.

Response: Hope that the revised MS will be satisfactory to the respected reviewer.

9. Is the writing acceptable? No, not really. I am assuming English is a second language for these authors. If that is the case, it is pretty good. But, it still needs grammatical work.

Response: Hope the writing has now acceptable standard