



Association between Family Developmental Stages and Clinical Manifestations of Patients with Psychosomatic Morbidity Presenting at a Primary Care Clinic in South-West Nigeria

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Authors' contributions

This work was carried out in collaboration between all authors. Author OAA designed the study, wrote the protocol and wrote the first draft of the manuscript. Authors AAA and MMAL managed the literature searches, analyses of the study performed by authors OEG and OMS. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/BJMMR/2016/24511

Editor(s):

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Complete Peer review History: <http://sciencedomain.org/review-history/13837>

Original Research Article

Received 23rd January 2016

Accepted 7th March 2016

Published 24th March 2016

ABSTRACT

Aim: This study aimed to find out the relationship between the clinical manifestations of patients with psychosomatic morbidity (PSM) and their family developmental stages.

Study Design: A cross sectional study.

Place and Duration of Study: The study period span between February 1st and April 30th 2013, during which patients who presented at the General Outpatient (GOP) clinic of the University College Hospital, Ibadan for various complaints were encountered.

Methods: A sample of 360 patients with varying forms of PSM identified by five or more from the symptoms in the primary evaluation of mental disorder- patient health questionnaire somatoform, anxiety and depression modules (PRIME-MD PHQ SADS) was recruited consecutively. The

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international classification for primary care second electronic version (ICPC-2E) was used to categorize the clinical manifestations of respondents while Stevenson's family developmental model classified the family developmental stages into emerging, crystallizing, interacting and actualizing family. Data were analyzed using statistical package for social sciences soft ware version 17. Statistical significance level was set at $p \leq 0.05$.

Results: Among the 360 respondents studied, 275 were married with age range between 19 and 80 years, 62.5% lived with their spouses, 3.1% divorced/ separated and 10.8% were widowed. Majority was females (74.9%) and the predominant family developmental stage was the crystallizing family (30.2%). General and unspecified physical (GUP) complaints were the commonest clinical manifestation seen in all the stages except the emerging family which has gynaecological complaints. Comparing the mean scores of married respondents with moderate-severe PSM and family stages shows that being married and living with spouses may be protective against severe forms of PSM ($P = .04$). On the other hand, comparing the mean scores of single and married respondents with moderate-severe PSM shows that respondents who are single may come with severe forms of somatoform disorder when compared with other single respondents with anxiety or depressive disorder ($P < .05$). There is however no relationship between the family developmental stage and severity of PSM.

Conclusion: There was interplay between medically unexplained physical complaints and patient's family characteristics. Being married and living with spouses may be protective against severe forms of PSM.

Keywords: Psychosomatic morbidity; clinical manifestation; family developmental stage; general and unspecified complaints.

ABBREVIATIONS

PSM; PRIME-MD; PHQ-SADs; ICPC-2E; GUPs; MUPs.

1. INTRODUCTION

The family is the basic unit in society and it provides the natural framework for the emotional, financial and material support essential for growth and development of its members [1]. The health-related events of members of the family may be a major family-related stress with impact directly or indirectly on other family members. The converse is also true as family-related stress had been shown in literature to have negative impact on health [2]. The stress can be seen in the context of family disruption and conflict (a situation where the family members are not in unity due to inability to resolve issues leading the children to seek solace outside the home environment). Family-related stress also affects the relationship that exists among family members and studies have shown that several factors relating to the dynamics of the family influence the aetio-pathogenesis of psychosomatic morbidity [3,4,5]. Family-related stressors include events such as lack of parent-child emotional bonding, parental workload, misbehaviour of children, teenage pregnancy, lack of emotional closeness between spouses, poor communication between spouses, divorce and remarriage [6]. The stressors vary from one

family to the other as each family is peculiar based on their form.

The form of a family in terms of structure and developmental stage also influence how an individual responds to psycho-social stressors. The changes over time in the structure and developmental stage of a family are a dynamic process. Failure to adapt to these changes can result in ill health which can manifest as psychosomatic morbidity (PSM).

The reactions to family-related stress include medically unexplained physical symptoms (MUPs) or general and unspecified physical complaints (GUPs) such as crawling, biting or peppery body sensations, feelings of heat or heaviness in the head, generalized body pains and aches, lump in the throat, poor sleep to even poor compliance to medical orders [7]. For this study, PSM refers to somatoform, anxiety and depressive disorders which are mental disorders that have been linked with certain life events and psycho-social stressors [8,9]. A hospital based study conducted in Sagamu local government area of Ogun state, Nigeria by Ogunsemi et al in 2010, found an overall prevalence of 63.1% for these mental disorders [10].

The role of the family is particularly relevant in the management of individual with PSM. Psychosomatic morbidity (depression, anxiety and somatoform disorders) among patients receiving primary care had been widely discussed in literature, but only a handful of studies deal with the interplay of the family form with the appraisal of family-related stressors and poorly differentiated illness manifestations. This study therefore sought to determine the relationship between family developmental stage and the clinical manifestations of adult patients with PSM at a Primary care clinic in Ibadan, Nigeria.

2. METHODOLOGY

A sample of 360 respondents was recruited between February and April 2013. A semi structured interviewer administered questionnaire was used to determine the socio demographic characteristics of respondents. Marital status was assessed as married and living with spouses, separated, divorced, widowed and single or never married. The age of first child and years of marriage were both asked for respondents who were married (family of procreation). The values got were used to describe their family developmental stages according to Stevenson's family developmental model [11] into emerging (first 10 years of marriage), crystallizing (marriage with teenage children), interacting (marriage with grown-up children) or actualizing family (aging couple).

The clinical manifestations were found and categorized using international classification for primary care second electronic version (ICPC-2E) [12]. In this study, Patient Health Questionnaire-SADS (PHQ-SADS): the Somatoform, Anxiety and Depression modules of the PRIME-MD PHQ were used because they are the common forms of psychosomatic disorders seen in a primary care setting [13]. The somatoform component has fifteen questions which have their scorings coded from 0 to 2 for each of the symptoms. It has a Cronbach alpha of 0.80 [14].

The anxiety module has seven questions with scoring from 0 to 3. It has a Cronbach alpha of 0.92 [15,16]. PHQ depression module of the questionnaire has nine questions coded the same way as for the anxiety module. It has a Cronbach alpha ranging from 0.86- 0.89 [17,18]. PHQ scores of 5, 10, and 15 represent cut off points for mild, moderate, and severe

assessments respectively. The PHQ has been found to be a useful tool in screening for psychosomatic disorder in local studies and in monitoring somatoform symptom severity in clinical practice and research [7,19].

Data were analyzed using statistical package for social sciences soft ware version 17 (SPSS -17). Tables and diagrams in form of graphs, charts were used for relevant variables. Cross tabulations of some independent variables and dependent variable were analyzed using independent t test and analysis of variance. Statistical significance level was set at $p \leq 0.05$. Ethical approval for the study was obtained from the joint University of Ibadan /University College Hospital Ethical Review Board (UI/UCH IRB).

3. RESULTS

The age of respondents ranged between 18 and 80 years, the predominant age group was age 30-44 years (33.6%) while the least age group was 60 years and above (15%). More than half of the respondents (67.8%) were females. Majority of respondents had married once 76.4%, this comprised those that were living with their husbands which constituted 225 (62.5%) of respondents, separated/divorced constituted 11(3.1%) of respondents and widowed constituted 39(10.8%) of respondents, while 85(23.6%) were never married. Monogamous family setting was the predominant family type seen in about 234(65%) of the study respondents. (Tables 1a and b)

3.1 Family Developmental Stage of Respondents

The most frequent family developmental stages observed were the crystallizing family (marriage with teenagers). This was found in about 30.2% of all respondents, 28.4% were at the stage of the emerging family (first 10 years of marriage) and interacting family stage (marriage with grown-up children) respectively and 13.0% were in the actualizing family stage (aging couple). See Table 2. Table 3 also shows the gender distribution of respondents and family stages.

3.2 Clinical Manifestation of Respondents and Family Developmental Stage

Of the 275 married respondents, the three commonest clinical manifestations of respondents in the emerging family group (first

10 years of marriage) were gynaecological complaints (23.1%), gastrointestinal complaints (17.3%), GUPs (14.5%), as shown in Fig. 1. Respondents who were in the crystallizing family group (marriage with teenagers), had GUPs complaints (26.2%), as the most frequent clinical manifestations, this was followed by neurological complaints (15.5%) and gastrointestinal and cardiovascular complaints each constituted (11.9%). Among respondents with grown-up children (interacting family), 28.5% had GUPs followed by musculoskeletal complaints (17.8%) and cardiovascular complaints (14.3%). In the aging respondents who were at the actualizing family stage, the most common clinical manifestations were GUPs (23.7%),

cardiovascular complaints (18.4%) and musculoskeletal complaints (15.8%).

3.3 Severity of Psychosomatic Morbidity

Majority of respondents had symptoms of somatoform disorder (95.6%) with PHQ-SADs Mild somatoform disorder was observed in 62.8% of respondents (mean score 6.7±1.5) and moderate to severe in 37.2% (mean score 12.9±2.9) of respondents.

The severity of anxiety and depressive disorders in the few respondents that had the symptoms were also scored same way as for somatoform disorders. Among the 44.4% respondents with

Table 1a. Sociodemographic characteristics of all respondents

Variables	Male n =116 (%)	Female n =244 (%)	N = 360 (%)
age group (years)			
<29	36 (31.0)	49 (20.1)	85 (23.6)
0-44	39 (33.6)	82 (33.6)	121 (33.6)
45-59	28 (24.1)	72 (29.5)	100 (27.8)
>60	13 (11.3)	41 (16.8)	54 (15.0)
Total	116 (100)	244 (100)	360 (100)
Marital status			
Single	47 (40.5)	38 (15.6)	85 (23.6)
Married	64 (55.2)	161 (66.0)	225 (62.5)
Divorced/separated	2 (1.7)	9 (3.6)	11 (3.1)
Widowed	3 (2.6)	36 (14.8)	39 (10.8)
Total	116 (100)	244 (100)	360 (100)
Family type			
Monogamous	82 (70.7)	152 (62.3)	234 (65.0)
Polygamous	34 (29.3)	92 (37.7)	126 (35.0)
Total	116 (100)	244 (100)	360 (100)
Educational status			
No education	5 (4.3)	46 (18.9)	51 (14.2)
Primary	14 (12.1)	43 (17.6)	57 (15.8)
Secondary	32 (27.6)	51 (20.9)	83 (23.1)
Tertiary	65 (56.0)	104 (42.6)	169 (46.9)
Total	116 (100)	244 (100)	360 (100)
Religion			
Christianity	70 (60.3)	147 (60.2)	217 (60.3)
Islam	46 (39.7)	97 (39.8)	143 (39.7)
Total	116 (100)	244 (100)	360 (100)
Ethnic group			
Yoruba	89 (76.7)	204 (83.6)	293 (81.4)
Igbo	15 (12.9)	17 (7.0)	32 (8.9)
Hausa	03 (2.6)	03 (1.2)	06 (1.7)
Others**	09 (7.8)	20 (8.2)	29 (8.0)
Income***			
<\$1.25/day	9 (7.8)	61 (25)	70 (19.4)
>\$1.25/day	107 (92.2)	183 (75)	290 (80.6)

*live with husband, separated, divorced and widowed, **Nupe, Igala, Edo, Kalabari, Itsekiri, Urhobo, ***Poverty line for World Bank is \$1.25/day (N5, 625/month) at 2010 Purchasing Power Parity (PPP)

Table 1b. Sociodemographic characteristics of married respondents

Variables	Male n =69 (%)	Female n =206 (%)	N = 275 (%)
age group (years)			
<29	2 (2.9)	17 (8.3)	19 (6.9)
30-44	27 (39.1)	76 (36.9)	103 (37.5)
45-59	27 (39.1)	72 (35.0)	99 (36.0)
>60	13 (18.9)	41 (19.9)	54 (19.6)
Total	69 (100.0)	206 (100)	275 (100)
Marital status			
Married	64 (92.8)	161(78.1)	225 (81.8)
Divorced/separated	2 (2.9)	9 (4.4)	11 (4.0)
Widowed	3 (4.3)	36 (17.5)	39 (14.2)
Total	69 (100.0)	206 (100.0)	275 (100.0)
Educational status			
No education	4 (5.8)	45 (21.8)	49 (17.8)
Primary	12 (17.4)	43 (20.9)	55 (20.0)
Secondary	17 (24.6)	43 (20.9)	83 (21.8)
Tertiary	36 (52.2)	75 (36.4)	111 (40.4)
Total	69 (100)	206 (100)	275 (100)
Religion			
Christianity	42 (60.9)	115 (55.8)	157 (57.1)
Islam	27 (39.1)	91 (44.2)	118 (42.9)
Total	69 (100)	206 (100)	275 (100)
Ethnic group			
Yoruba	54 (78.3)	177 (85.9)	231 (84.0)
Igbo	05 (7.2)	12 (5.8)	17 (6.2)
Hausa	02 (2.9)	03 (1.5)	05 (1.8)
Others**	08 (11.6)	14 (6.8)	22 (8.0)
Income***			
<\$1.25/day	4 (5.8)	61 (24.3)	54 (19.6)
>\$1.25/day	65 (94.2)	156 (75.7)	221 (80.4)

live with husband, separated, divorced and widowed, **Nupe, Igala, Edo, Kalabari, Itsekiri, Urhobo, *Poverty line for World Bank is \$1.25/day (N5, 625/month) at 2010 Purchasing Power Parity (PPP)*

Table 2. Frequency distribution of family stages

Family stage	Frequency (f)	Percentage (%)
Emerging	78	28.4
Crystallizing	83	30.2
Interacting	78	28.4
Actualizing	36	13.0
Total	275	100.0

Table 3. Frequency distribution of family stages by male and female distribution

Sex	Emerging freq (%)	Crystallizing freq (%)	Interacting freq (%)	Actualizing freq (%)	Total (N) freq (%)
Male	26 (33.3)	23 (27.7)	18 (23.1)	5 (13.9)	72 (26.3)
Female	52 (66.7)	60 (72.3)	60 (76.9)	31 (86.1)	203 (73.7)
Total	78 (100.0)	83 (100.0)	78 (100.0)	36 (100.0)	275 (100.0)

symptoms of anxiety, mild disorder was observed in 70.6% of respondents (mean score 6.7±1.4), moderate to severe in 29.4% (mean score 13.0±3.0) of respondents. Only 40% respondents had depressive symptoms out of which 66.7%

respondents were observed to have mild symptoms (mean score 6.5±1.5) and moderate to severe depressive disorder were seen in 33.3% (mean score 12.6±4.1) of respondents as shown in the Table 4 of mean scores below.

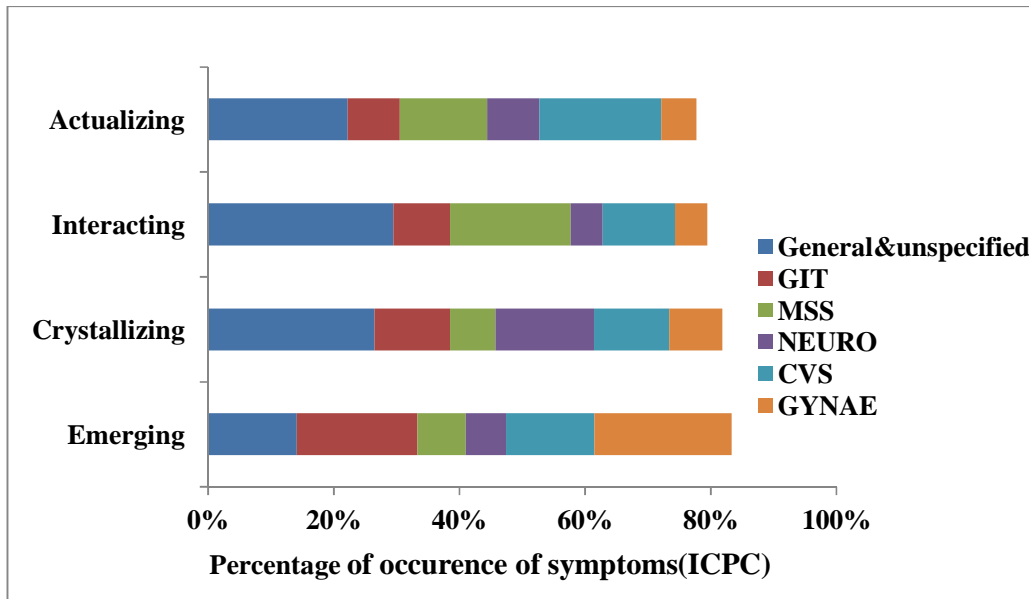


Fig. 1. Showing clinical manifestation of respondents and family developmental stage

3.4 Mean Scores of Severity of Psychosomatic Morbidity with Marital Status and Family Stage of Respondents

The various mean scores of morbidity with the marital status and developmental stages were as stated in Tables 4a-c. The mean PHQ score of respondents who are single with moderate to severe somatoform disorder (14.1 ± 2.9) was higher when compared with married respondents with the same severity (12.5 ± 2.9). Similar results were observed in anxiety (13.3 ± 3.5 Vs 12.8 ± 2.7) and (12.0 ± 3.5 Vs 14.1 ± 5.3) for depressive disorders.

3.5 Mean Scores of Single and Married Respondents with Moderate-Severe Psychosomatic Morbidity Using Independent T Test

Respondents with the predominant psychosomatic morbidity (somatoform disorder) who were single with moderate to severe disorder (mean PHQ score 14.1 ± 2.9) were compared with those who had married with moderate to severe disorder (mean PHQ score 12.5 ± 2.9) using independent t test. The result shows that respondents who are single may come with severe forms of somatoform disorder when compared with other single respondents with anxiety or depressive disorder ($P < .05$).

3.6 Moderate –Severe Psychosomatic Morbidity and Marital Status of Respondents

The mean scores of respondents with moderate to severe psychosomatic morbidity were compared with their marital status using analysis of variance (Table 6). The result shows that marriage may be protective against severe forms of PSM ($P = .04$).

3.7 Moderate-Severe Psychosomatic Morbidity and Family Developmental Stages

When the mean scores of moderate-severe PSM and family developmental stages of respondents using analysis of variance, the result shows that the stages of family development and severity of PSM may not be related. (ANOVA F test $P = .37, .14, .61$ for somatoform, anxiety and depressive disorder respectively (Table 7).

4. DISCUSSION

The family developmental stages delineated were the emerging, crystallizing, interacting and actualizing stages. These family stages have differing tasks (encompassing child-rearing, spousal relationship sustenance, and interaction with community organizations) for individuals as they move from one family stage to the other. Couples negotiating the emerging family stage

strive to develop identity that is economically, emotionally, and socio-culturally separate from their family of origin. They also adjust to marital relationship and develop parenting behaviours for biological offspring. Life event stressors at this stage typically revolve around careers and

children [20]. In this study, respondents in the emerging family stage (first 10 years of marriage) had gynaecological symptoms (21.8%) constituting the predominant complaints. These gynaecological symptoms bordered on infertility, sub-fertility and disturbances of menstrual flow.

Table 4a. Mean scores of severity of somatoform disorder and family stage of respondents

Respondents characteristics	Frequency	Mean PHQ somatoform scores
All	360	8.7±3.8
Married	275	8.6±3.6
Single	85	9.1±4.5
Mild somatoform	216	6.7±1.5
Moderate to severe somatoform	128	12.9±2.9
Married with mild	165	6.8±1.5
Married with moderate to severe	97	12.5±2.9
Single with mild	51	6.4±1.7
Single with moderate to severe	31	14.1±2.9
Married + moderate- severe +emerging	25	12.8±3.5
Married +moderate-severe +crystallizing	31	13.1±2.9
Married + moderate-severe + interacting	34	12.0±2.1
Married + moderate-severe + actualizing	7	11.6±3.0

Table 4b. Mean scores of severity of anxiety disorder and family stage of respondents

Respondents characteristics	Frequency	Mean PHQ anxiety scores
All	360	4.6±4.4
Married	275	4.5±4.1
Single	85	5.3±5.2
Mild anxiety	113	6.7±1.4
Moderate to severe anxiety	47	13.0±3.0
Married with mild	92	6.7±1.4
Married with moderate to severe	29	12.8±2.7
Single with mild	21	6.7±1.5
Single with moderate to severe	18	13.3±3.5
Married + moderate- severe +emerging	9	14.2±3.5
Married + moderate-severe crystallizing	12	12.7±2.1
Married + moderate-severe + interacting	7	11.1±1.5
Married + moderate-severe + actualizing	1	12.0±0.0

Table 4c. Mean scores of severity of depressive disorder and family stage of respondents

Respondents characteristics	Frequency	Mean PHQ depression scores
All	360	4.4±4.4
Married	275	4.2±4.0
Single	85	5.1±5.3
Mild depression	96	6.5±1.5
Moderate to severe depression	48	12.6±4.1
Married with mild	70	6.4±1.3
Married with moderate to severe	34	12.0±3.5
Single with mild	26	7.0±2.0
Single with moderate to severe	14	14.1±5.3
Married + moderate- severe +emerging	8	13.3±3.3
Married + moderate-severe +crystallizing	12	12.2±5.0
Married + moderate-severe + interacting	9	11.4±1.2
Married + moderate-severe + actualizing	5	12.0±3.5

Table 5. Comparing mean scores of single and married respondents with moderate-severe psychosomatic morbidity using independent t test

Moderate-severe	Single (mean scores)	Married (mean scores)	t test	p-value
Somatoform	31 (14.1±2.9)	97 (12.5±2.9)	2.68	0.008*
Anxiety	18 (13.3±3.5)	29 (12.8±2.7)	0.59	0.554
Depression	14 (14.1±5.3)	34 (12.0±3.5)	1.34	0.197

*Level of significance at $P < .05$

Table 6. Comparing mean scores of married respondents with moderate- severe psychosomatic morbidity and family stages using analysis of variance

Marital status	Frequency	Mean scores	F-test	P value
Married	78	12.6±3.0	2.83	0.04*
Separated	04	13.8±2.6		
Widowed	15	11.9±2.2		
Single	31	14.1±2.9		

*Level of significance $P = .05$

Table 7. Comparing the mean scores of moderate-severe PSM and family developmental stages using analysis of variance

PSM	Emerging	Crystallizing	Interacting	Actualizing	F-test	P value
Somatoform	12.8±3.5	13.1±2.9	12.0±2.1	11.6±3.0	1.06	0.37
Anxiety	14.2±3.5	12.7±2.1	11.1±1.5	12.0±0	2.00	0.14
Depression	13.3±3.3	12.2±5.0	11.4±1.2	12.0±3.5	0.62	0.61

Level of significance $P < .05$

This is not unexpected among respondents who are young, and reproductively aspiring in an environment with high expectations of fecundity. Other symptoms observed were gastrointestinal symptoms (abdominal pain / discomfort, indigestion, constipation) which accounted for 19.2%, and GUS complaints (14.1%). Ewurdjakpor [21] (even though he did not use Stevenson's family developmental model in his study), divided his study participants into major age groups. The age group 25 - 44 years in his study (which is broadly inclusive of the ages of most respondents in the emerging family stage) had abdominal symptoms as the commonest complaints. This can be related to this study's finding of gastrointestinal symptoms as the second commonest complaints in respondents in the emerging family stage. All other respondents in the crystallizing, interacting and actualizing family stages had GUS complaints as their commonest clinical manifestations.

In the crystallizing stage family where there are teenage children going through the adolescent stages, parents usually have the task of assuming responsibility for growth and development of individual members both within and outside the family organizations. Educating and guiding the teenage children against risky

behaviour is also a task faced by such parents. However, parents facing this challenge may present to their health care provider with GUS complaints, neurological complaints in form of headaches from stress. This pattern of clinical manifestation was reported in the study by Ewurdjakpor, where respondents in ages 45 to 55 years had headaches as the commonest complaints. Similarly in this study, respondents in the crystallizing family stage had apart from GUS complaints, neurological symptoms (headaches, dizziness) as their common clinical manifestations.

Among the predominant symptoms of individuals in the interacting family stage (marriage with grown-up children and young grand children, whose health task include assuming responsibility for continued survival of the family and enhancement of nation) were complaints related to the musculoskeletal system (joint aches and backaches) and cardiovascular system (elevated blood pressure). In this study, the last family stage (actualizing family – aging couple alone) also had cardiovascular and musculoskeletal complaints as the predominant clinical manifestations. This can be related to the age group of above 65 years in the study by Ewurdjakpor that found backaches

(musculoskeletal complaints) as one of the commonest symptoms [21]. This was similar to the findings of musculoskeletal system complaints as the most common morbidity among care-seeking elderly patients in Ilorin, Nigeria by Abdulrahman and Abdulraheem [22]. Haftgoli et al also reported musculoskeletal complaints in the older persons in their study [23]. Generally, there is paucity of studies on Stevenson's family developmental model and psychosomatic manifestations; such that relationship between psychosomatic manifestations and family developmental stage cannot be adequately compared. Perhaps with more local studies on this and using a large sample size, association between psychosomatic manifestations and family developmental stage could be well compared.

5. CONCLUSION

It is concluded from this study that: 1) There was an interplay between medically unexplained physical symptoms and patient's family characteristics. 2) Being married and living with spouses may be protective against severe forms of PSM, 3) Severity of Psychosomatic morbidity may not have any correlation with family developmental stages.

CONSENT

All authors declare that 'written informed consent was obtained from the respondents for publication of this paper'.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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