Research article
Ερευνητική εργασία

Severity of domestic abuse and its relationship with distress tolerance and medication adherence in women with mental illness in South India

D. Ram, S. Rani Naik, A. Kumar, B. Gowdappa

Department of Psychiatry, Jagadguru Sri Shivarathreeshwara (JSS) Medical College, Mysore, India

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Domestic abuse is prevalent in all strata of society and has been associated with various mental health problems. However, the severity of abuse in women with mental illness has not been studied much. The amount of distress experienced often depends on the severity of domestic abuse. Ability to tolerate distress may buffer the effect of abuse-this determines the perceived level of abuse. Both the severity of abuse and distress tolerance may in turn determine adherence behaviour towards treatment in mentally ill women. There is a paucity of research examining these variables. Hence this study was undertaken to examine the severity of abuse and distress tolerance and their relationship with medication adherence in women with mental illness. This study took place on an outpatient basis in the department of psychiatry at a tertiary care centre in South India. One hundred women with a mental illness currently in remission for at least two months –living in the community with family members after an episode of mental illness– were consecutively recruited by purposive sampling method after obtaining an informed consent. Due to issues related to reliability, patients with a diagnosis of mental retardation or dementia or psychotic symptoms were not included. All participants were initially assessed using socio-demographic and clinical forms. The severity of abuse was assessed with Composite Abuse Scale (CAS) and the level of distress tolerance was evaluated with Distress Tolerance Scale (DTS). Medication adherence status was assessed with the commonly used Morisky Medication Adherence Scale (MMAS). There was a high level of abuse (mean 20.33, SD=20.55) and distress tolerance (mean 26.80, SD=12.07) in this sample as compared to those in general population. Scores in domestic abuse had a significant positive association with Tolerance (p=0.001) and Absorption (p=0.014) subscales of distress tolerance. Scores in domestic abuse had no statistically significant association with level of medication adherence. With the findings of this study, it can be concluded that women with mental illness face considerable level of domestic abuse and they have a higher capacity to tolerate distress. Severity of domestic abuse is inversely associated with their perceived ability to tolerate emotional distress; and positively associated with the level of attention being absorbed by negative emotions. The study was constrained by its cross-sectional design and small sample size, and further replication of data is needed with bigger sample size and control group.

Key words: Domestic violence, distress tolerance, medication adherence, mental illness.

Introduction

Domestic abuse can be defined as a range of sexually, psychologically and physically coercive acts against women.[1] The exact magnitude of the problem in India is unknown, though it is estimated to be huge. National Family Health Survey (2005–2006) reported a two-fifth of all married women to have experienced sexual or physical violence at some point of time.[2] Domestic abuse is etiologically linked to mental illness in women. There is a positive association of domestic violence and occurrence of mood and psychotic disorders in women.[3,4] There is a paucity of research examining the implication of domestic abuse in women with mental illness. Few studies reveal a high prevalence of domestic abuse in Indian population.[5–7] In general population, domestic violence is associated with high psychological distress, though the level of distress tolerance is unknown.[8,9]

Distress tolerance (DT) is the perceived or actual capability to tolerate aversive emotional and physical experience.[10] DT is an individual's evaluation of and expectations about experiencing distress and is associated with a tendency to alleviate or escape negative emotional experience.[11] DT is considered as a transdiagnostic risk, maintenance or preventive factor of psychological disorders.[10] There is some evidence that distress tolerance is positively associated with domestic violence[12] and negatively associated with health seeking skills.[13] Shorey et al, reported a negative association between distress tolerance and physical and psychological abuse perpetration in substance use disorder.[14] Indirect evidence suggests a high level of stress associated with non-adherence to medication in general population.[15] On the other hand, distress tolerance may interact with circumstances and motivation to enhance adherence to treatment in substance use disorder.[16] However, such a relationship has not yet been established in other mental disorders and needs to be explored.

Women with abuse not only suffer from mental illness frequently, but also receive psychotropic medication more frequently than general population.[17] Though abuse has been reported to be related to low medication adherence in physical illness, there is no report of such association between abuse and medication adherence in mental illness,[18] hence there is a need to explore it.

Keeping in mind the above background, this study was conducted to access the levels and relationships of abuse, distress tolerance and medication adherence. There is a knowledge gap as to how abuse and distress tolerance are interrelated, and what is their association with medication adherence. We hypothesised that adherence has a negative association with abuse and a positive association with distress tolerance, while the interrelationship of abuse and distress tolerance is positive.

Material and method

This study was conducted at the outpatient department of psychiatry in a tertiary care centre in south India. One hundred women with mental illness currently in remission for at least two months and who are living in the community with family members after an episode of mental illness were consecutively recruited by purposive sampling method after obtaining an informed consent. Participants were excluded if they had a diagnosis of mental retardation, dementia or psychotic disorder due to issues related to reliability. For this study, the presence of any psychiatric diagnosis according to ICD 10 (10th revision of the International Statistical Classification of Diseases and Related Health Problems) was considered as "Mental disorder". All assessments were done by a qualified psychiatrist who assessed the diagnosis and remission states with MINI Plus,[19] case record files, discussion with the treating psychiatrist, and interview of patients and key informant(s). All eligible participants were further assessed with the following tools: Socio-demographic and clinical forms including age, education, occupation, marital status, socio-economic-status, family type, domicile, diagnosis, age at onset of illness, duration of illness, family history of mental disorder, history of abuse in childhood, substance use in family, attitude of others etc.

Composite Abuse Scale (CAS): CAS is the most commonly used tool to assess the frequency of domestic abuse.[20] The scale is rated on five-point likert for all 30 items. Sum of all items (CAS Score) indicates the level of abuse. Higher scores indicate more severe and frequent abuse.

Items of the CAS can be grouped into 4 subscales – severe combined abuse, physical abuse, emotional abuse, and harassment. These subscales are useful in assessing how different forms of abuse impact the physical and mental health of women. CAS has a high internal

consistency and a Cronbach's alpha value of >0.85. For this study, the scale was translated into Kannada. This scale has been used in the Indian population.[5]

Distress Tolerance Scale (DTS): This self-report scale consists of 15 items, and intends to measure distress tolerance, i.e., one's ability to tolerate psychological distress.[11] The scale can be subdivided into four subscales: (1) Tolerance – perceived ability to tolerate emotional distress, (2) Absorption – attention being absorbed by negative emotions, (3) Appraisal – subjective appraisal of distress, and (4) Regulation – regulation efforts to alleviate distress. The scores of the scale range from 15 to 75, and are found to be of good internal consistency, test-retest reliability, and discriminant validity. In this study, the scale was translated into Kannada. This instrument has been used in the Indian population.[5]

Morisky Medication Adherence Scale: The MMAS-8 is a self-reporting tool and most commonly used in research todetermine medication adherence. It has a yes or no response option for each question and score ranges from 0 to 1. Each question is intended to measures the specific adherence behavior of the respondent. Score of <6 indicate low adherence, 6–8 score indicates medium adherence, and a score of ≥8 indicates high adherence. The sensitivity and specificity are 93% and 53%, respectively, with Cronbach's alpha value of 0.83.[21] A Kannada translated version was used in this study.

Data analysis was conducted with SPSS version 16. The demographic and clinical characteristics were expressed with descriptive statistics. The Kruskal-Wallis H test was used to examine the group difference between three or more variables, and scores on subscales of distress tolerance and different severity of burden were analyzed using multiple linear regression analysis, to find out the relationship with severity of abuse. The level of statistical significance was kept at $p<0.05$ for all tests.

Results

Most participants were employed, belonging to lower socio-economic status, Hindus, married, from rural background, and suffering from mood disorders (table 1). The majority of participants did not report substance use in family, childhood abuse, and family history of mental illness.

In our sample the mean score of age was 37 years and duration of illness was 4.91 years. The scores in CAS, DTS, and MMAS are presented in table 2.

The linear regression analysis between CAS score and the subscales of DTS (R^2=0.179, F=5.175, p=0.001) revealed a significant negative association of CAS with Tolerance subscale (p=0.001) and positive association with Absorption subscale (p=0.014) (table 3).

Table 1. Demographic and clinical characteristics

	Variables	n=%
Occupation	Unemployed	35
SES	Low	62
	Middle	38
Religion	Hindu	91
	Muslim	9
Marital status	Single	10
Residence	Rural	68
Family type	Nuclear	85
	Joint	15
Diagnosis	F10	3
	F20	4
	F30	82
	F40	11
Substance use in family	Yes	21
Childhood abuse	Yes	5
Family history of mental illness	Yes	10

Table 2. Demographic and clinical characteristics.

	Minimum	Maximum	Mean (SD)
Age	14.00	61.00	37.02 (9.37)
Education	1.00	5.00	2.02 (1.00)
Age at onset	1.00	54.00	32.45 (9.28)
Duration of illness	1.00	25.00	4.91 (4.07)
CAS Score	0.00	92.00	20.33 (20.55)
DTS Score	4.00	51.00	26.80 (12.07)
MMAS Score	1.00	8.00	5.84 (1.66)

Table 3. Multiple regression analysis with scores on DTS subscales as independent variables and CAS Score as dependent variable.

Unstandardized Coefficients		Unstandardized Coefficients		Standardized Coefficients	Sig.	t
		B	Std. Error	Beta		
1	(Constant)	15.605	4.870		3.204	0.002
	Tolerance	–4.447	1.294	–0.557	–3.437	0.001
	Absorption	4.522	1.808	0.591	2.501	0.014
	Appraisal	0.231	0.785	0.057	0.294	0.770
	Regulation	0.664	1.254	0.092	0.530	0.598

(a) Predictors: Regulation, Tolerance, Appraisal, Absorption, (b) Dependent Variable: CAS Score, (c) R^2=0.179, F=5.175, p=0.001

Using the Kruskal Wallis H Test, statistically no significant association was observed between CAS and MMAS score or between DTS and MMAS score (tables 4 and 5, respectively).

Discussion

Demographic characteristics in this study were similar to other reports from the centre. Some variables such as low socioeconomic status, rural background and duration of illness more than 4 years are known to be associated with domestic abuse,[5] while there were other clinical variables such as low substance use in family and nil child abuse which were associated with low domestic violence.[22] However mean score of 20.33 (SD±20.55) on CAS indicates an overall high level of abuse in this study compared to those reported in general population (Mean=3.3, SD=3.3).[23]

High level of distress tolerance has been reported from India where in it has been associated with history of substance use in the family, history of any past treatment for on-going psychiatric illness and level of knowledge about treatment options. Indian culture has been attributed in favouring higher distress tolerance.[17] Indian women use multiple coping strategies such as relaxation, exercise, yoga, writing a diary, prayer, recreation with family, spending time with friends, reading books, travelling or outing, listening to music, etc.[24]

In this study we found that there was a statistically significant association of CAS score with the Tolerance (negative) and Absorption (positive) subscales of DTS. Tolerance to abuse depends upon the severity of abuse. In Indian context, psychological abuse in women is acceptable to a certain degree. However once the threshold is crossed, tolerance may reduce significantly. Thus a lower level of abuse may be tolerated more while higher levels of abuse are considered as unacceptable leading to low distress tolerance. This is

Table 4. Relationship between abuse and medication adherence (Kruskal Wallis test).

	MMAS score	n	Mean Rank	Chi-Square	df	p
CAS Score	Poor	29	47.78			
	Moderate	69	51.38	0.514	2	0.773
	Good	2	59.50			

Table 5. Relationship between distress tolerance and medication adherence (Kruskal Wallis test).

	MMAS score	n	Mean Rank	Chi-Square	df	p
DTS Score	Poor	29	45.57			
	Moderate	69	53.03	1.955	2	0.376
	Good	2	34.75			

consistent with our observation that there was a high level of distress tolerance in this study. Another possibility is that individuals with abuse exhaust resources to tolerate and a high abuse level may be associated with lower distress tolerance.

Consistent with our hypothesis, we found a positive association between abuse and absorption subscale of DTS. More level of abuse leads to more deployment of attention and changes in cognition.[25] The individual differences in distress tolerance depend upon the tendency to approach/avoid potentially distressing situations, coping styles, tendency to have attention absorbed by focusing on distressing aspects of the situation or to try to avoid attending to distressing aspects of a situation, and altering meaning of the situation. The response to abuse involves modulation of behavioral, experiential, and physiological responses, each of which may be increased or decreased as a function of distress tolerance. One's ability to tolerate psychological discomfort may thus influence both types of strategies one uses to manage affect as well as moderating affective regulatory functions on behaviour.[11]

Our hypothesis stood towards a negative association of adherence with abuse and a positive association with distress tolerance, but it was not confirmed. This indicates that experiencing abuse does not help to develop adaptive coping strategies and is mitigated by the presence of high resilience. Previous report revealed a negative association of abuse with adherence while resilience enhance adherence among HIV patients.[26,27] Freire de Medeiros et al reported resilience to be positively associated with adherence in patients with hemodialysis.[28] Possible reasons could be that previous studies had different study populations, severity of illness, and level and nature of abuse. A difference in adherence has been observed between developed and developing countries.[29] Most studies were conducted in Western countries,[15,18] and socio-demographic factors may differentially mediate adherence behaviour[30] as adherence is multi-faceted.

Based on the findings of this study, it can be concluded that women with mental illness face a considerable level of domestic abuse and have more capacity to tolerate distress. Severity of domestic abuse is inversely associated with perceived ability to tolerate emotional distress; and positively associated with levels of attention being absorbed by negative emotions. Our study was constrained by its cross-sectional design and small sample size, and further replication is needed by studies with larger samples and control group.

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Η βαρύτητα της ενδοοικογενειακής κακοποίησης και η σχέση της με την ανοχή στην ψυχική καταπόνηση και τη συμμόρφωση με την αγωγή σε γυναίκες με ψυχική νόσο στη Νότια Ινδία

D. Ram, S. Rani Naik, A. Kumar, B. Gowdappa

Department of Psychiatry, Jagadguru Sri Shivarathreeshwara (JSS) Medical College, Mysore, India

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Η ενδοοικογενειακή βία είναι συχνή σε όλα τα κοινωνικά στρώματα και έχει συσχετιστεί με σοβαρά προβλήματα ψυχικής υγείας. Ωστόσο, η βαρύτητα της κακοποίησης σε γυναίκες με ψυχική νόσο δεν έχει μελετηθεί επαρκώς. Το μέγεθος της ψυχικής καταπόνησης που βιώνεται, συχνά εξαρτάται από

τη σοβαρότητα της ενδοοικογενειακής βίας. Η ικανότητα ανοχής της ψυχικής καταπόνησης μπορεί να εξουδετερώνει την επίδραση της κακοποίησης και αυτό καθορίζει το επίπεδο προσλαμβανόμενης κακοποίησης. Τόσο η σοβαρότητα της κακοποίησης όσο και η ανοχή στην ψυχική καταπόνηση μπορούν με τη σειρά τους να καθορίζουν τη συμπεριφορά συμμόρφωσης στη θεραπεία σε ψυχικά πάσχουσες γυναίκες. Υπάρχει ελάχιστη έρευνα που να εξετάζει αυτές τις μεταβλητές. Έτσι η μελέτη αυτή είχε ως στόχο να εξετάσει τη βαρύτητα της κακοποίησης, την ανοχή στην ψυχική καταπόνηση και τη σχέση τους με τη συμμόρφωση στην αγωγή σε γυναίκες με ψυχική νόσο. Η μελέτη διενεργήθηκε σε εξωτερικούς ασθενείς στην ψυχιατρική κλινική σε ένα κέντρο τριτοβάθμιας φροντίδας στη Νότια Ινδία. Εκατό γυναίκες με ψυχική νόσο που βρίσκονταν σε ύφεση για δύο μήνες τουλάχιστον και που ζούσαν στην κοινότητα μαζί με μέλη της οικογένειας μετά από ένα επεισόδιο της ψυχικής νόσου κλήθηκαν στη σειρά με μη-τυχαία δειγματοληψία, αφού χορήγησαν τη συναίνεσή τους μετά από ενημέρωση. Προκειμένου να διασφαλιστεί η αξιοπιστία, ασθενείς με διάγνωση νοητική υστέρηση, άνοια ή οξέα ψυχωτικά συμπτώματα δεν συμπεριλήφθηκαν στο δείγμα. Όλοι οι συμμετέχοντες εκτιμήθηκαν αρχικά με χρήση φόρμας κοινωνικών, δημογραφικών και κλινικών στοιχείων. Η σοβαρότητα της κακοποίησης εκτιμήθηκε με την κλίμακα Composite Abuse Scale (CAS) και το επίπεδο ανοχής στην ψυχική κακοποίηση αξιολογήθηκε με την κλίμακα Distress Tolerance Scale (DTS). Η συμμόρφωση στη φαρμακευτική αγωγή εκτιμήθηκε με την ευρείας χρήσης κλίμακα Morisky Medication Adherence Scale (MMAS). Υπήρξε υψηλό επίπεδο κακοποίησης (ΜΟ=20,33, ΤΑ=20,55) και ανοχής στην ψυχική καταπόνηση (ΜΟ=26,80, ΤΑ=12,07) στο δείγμα σε σύγκριση με τα αντίστοιχα επίπεδα στον γενικό πληθυσμό. Η βαθμολογία στην ενδοοικογενειακή κακοποίηση είχε σημαντική θετική συσχέτιση με τις υποκλίμακες Ανοχή (p=0,001) και Απορρόφηση (p=0,014) της ανοχής ψυχικής καταπόνησης. Η βαθμολογία στην ενδοοικογενειακή κακοποίηση δεν είχε καμία στατιστικά σημαντική συσχέτιση με το επίπεδο συμμόρφωσης με τη φαρμακευτική αγωγή. Βάση των ευρημάτων αυτής της μελέτης, μπορούμε να συμπεράνουμε ότι οι γυναίκες με ψυχική νόσο έρχονται αντιμέτωπες με αξιοσημείωτο επίπεδο ενδοοικογενειακής κακοποίησης και έχουν μια αυξημένη ικανότητα να ανέχονται την ψυχική καταπόνηση. Η βαρύτητα της ενδοοικογενειακής κακοποίησης συνδέεται αντιστρόφως ανάλογα με την προσλαμβανόμενη ικανότητα ανοχής της συναισθηματικής καταπόνησης και θετικά με το επίπεδο κατά το οποίο η προσοχή απορροφάται από αρνητικά συναισθήματα. Η μελέτη είχε ως περιορισμούς ότι ήταν συγχρονική και είχε μικρού μεγέθους δείγμα και χρειάζεται περαιτέρω αναπαραγωγή των ευρημάτων με μεγαλύτερο δείγμα και ομάδα ελέγχου.

Λέξεις ευρετηρίου: Ενδοοικογενειακή βία, ανοχή στην ψυχική καταπόνηση, συμμόρφωση με τη φαρμακευτική αγωγή, ψυχική νόσος.

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Corresponding author: Dr Dushad Ram, Department of Psychiatry, JSS Medical College, JSS University, Mysore, Karnataka, 570004, India, Tel: (+91) 900 874 0965
e-mail: dushadram@gmail.com