



“A STUDY TO ASSESS THE RISK OF IMMINENT AGGRESSION IN INSTITUTIONALIZED YOUTH OFFENDERS USING THE DYNAMIC APPRAISAL OF SITUATIONAL AGGRESSION AT SELECTED HOSPITALS, RANCHI (JHARKHAND).”

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Abstract

The main aim of the study is to assess the risk of imminent aggression in institutionalized youth offenders using the dynamic appraisal of situational aggression at selected hospitals, Ranchi (Jharkhand). This study aimed to examine the predictive validity of an empirically validated measures, designed to appraise the risk of imminent aggression within institutionalized adults psychiatric patients [Dynamic Appraisal of Situational Aggression; DASA], in adolescent male and female offenders. Convenient sampling technique was used to select the study participant. The supervising staff members on the residential units related the DASA daily for 50 youth [30 males and 20 females] over one month. The result showed that DASA total scores significantly predicted institutional aggression in the following 24 and 48 hrs; however, the predictive validity of the DASA for institutional aggression was, at best, modest. Further analyses on male and female subsamples revealed that the DASA total scores only predicted imminent institutional aggression in the male subsample. Item analyses showed that negative attitude, anger when requests and denied, and unwillingness to follow instructions predicted institutional aggression more strongly as compared with other behavioral manifestations of an irritable and unstable mental status as assessed by the DASA.

Hence it is concluded that the DASA may have some utility for the identification of youth at risk of imminent aggression within institutional settings, though the results are far from compelling as compared with the previous studies on adult population. It is evident that a high ratio of supervision staff to residents is important to ensure that the predictive validity is acceptable at selected hospitals of Ranchi (Jharkhand).

Key Words:- Assess, Aggression, Institutionalized youth offenders, Dynamic Appraisal of Situational Aggression.

INTRODUCTION

Aggressive behavior in incarcerated youth presents a significant problem for staff, co-residents and the functioning of the institution. Psychiatric units and correctional facilities are unique institutional environments where people are typically detained against their will, restricted in their daily activities and movement, and supervised by authority figures (e.g. nurses, corrections officers, and supervision staff). Aggression within these institutions is common, and frequently occurs consequent to the anger that is aroused by the restrictions and demands that are placed on individuals to maintain the regime and to facilitate treatment adherence. Violence risk assessment has become a cornerstone of aggression prevention and management programs in these institutions. As such, there has been an increase in the development and testing of structured risk assessment instruments.

Dynamic risk assessment measures

Several violence risk assessment measures that appraise risk for imminent aggression within the institutional context have been developed (the Dynamic Appraisal of Situational Aggression [DASA]). These measures comprise dynamic variables that appraise risk state, the so-called intra individual variability in violence potential. Within the inpatient or institutional setting, risk management and treatment decisions are required frequently. Day-to-day appraisals of risk state are of central importance to staff working in these restrictive institutional settings, as appropriate monitoring of risk state can assist staff to manage individuals on the unit, as well as to plan and facilitate treatment, rehabilitation, and recreational activities that are affected by the likelihood of violence (e.g. Does the patient require additional interventions [e.g. biological, social, and psychological] today? What level of supervision is required for this patient today?).

In this aspect, the DASA are sensitive to change, and the items are straightforward and simple to score, thereby allowing regular efficient appraisals of violence risk. Dynamic risk assessment measures have generally been found to have moderate to strong predictive validity for inpatient and institutional aggression in the short-term. The DASA has been shown to significantly predict interpersonal violence within inpatient forensic psychiatric settings (AUCs = 0.61–0.82) (Barry- Walsh, Daffern, Duncan, & Ogloff, Citation 2009; Daffern & Howells, Citation 2007; Daffern et al., Citation 2009; Ogloff & Daffern, Citation 2006; Vojt, Marshall, & Thomson, Citation 2010).

Gender differences

In general, studies on risk assessment measures have mainly examined male samples, and (until recently) have not conducted separate analyses for the male and female samples. Nevertheless, there has been considerable theoretical and empirical literature that suggests that there may be unique risk factors of violence for females, and these unique factors may affect the predictive validity of the risk assessment measures, which may have been developed with predominantly male samples. Although some researchers did not find any significant differences in the predictive validity of an adult violence risk assessment measure (i.e. Historical, Clinical, Risk Management – 20 Factors [HCR-20]) for males and females (e.g. Strand & Belfrage, Citation 2001; Webster, Douglas, Eaves, & Hart, Citation 1997), other scholars have suggested that there may be gender differences when clinicians predict outcomes using risk assessment measures (e.g. Coid et al., Citation 2009; deVogel & deRuiter, Citation 2005; Manchak, Skeem, Douglas, & Siranosian, Citation 2009; Nicholls, Ogloff, & Douglas, Citation 2004). In any case, it is apparent this issue has been seldom examined in the risk assessment literature.

Applicability of adult risk assessment measures in youth populations

Compared with the increased attention on dynamic risk assessment within adult psychiatric and correctional institutions, fewer published studies have examined the utility of dynamic risk assessment measures for institutionalized youth. There are several studies that have tested the predictive validity of violence and general criminal recidivism risk assessment measures within institutional settings, but these studies have exclusively employed measures that are designed to predict aggression or violence in the medium to long term (several months to years), including the Structured Assessment of Violence Risk in Youth.

Though these measures may identify incarcerated youth who require additional supervision or intervention over the longer term due to their higher risk status, they are unwieldy for daily assessment. In particular, their capacity to measure change in risk state on a daily basis is also unknown; moreover, as noted previously, daily assessments of risk are a fundamental part of management and treatment decision-making within institutional settings. However, given that developmental factors may moderate the accuracy of risk assessment measures that have been developed for adults when used with young persons and youth (e.g. Viljoen, Elkovitch, Scalora, & Ullman, Citation 2009; Viljoen et al., Citation 2008), it is important to examine whether adult risk assessment measures are suitable for use in youth populations. Presently there is no empirically derived and validated violence risk assessment measure that is capable of assisting staff to identify incarcerated or hospitalized youth at risk of imminent aggression.

NEED OF THE STUDY

The prevalence of people with schizophrenia in 2019, according to the World Health Organization (WHO), is 20 million people worldwide. People with schizophrenia are closely related to the risk of increased violent behaviour. The Dynamic Appraisal of Situational Aggression (DASA) is a risk assessment instrument of violence, that nurses can use in psychiatric services, but the accuracy of the instrument in predicting violent behavior in 24 hours need to be tested. In addition to the assessment of risk the DASA also allows for acts of aggression to be recorded. Within SLAM acts of aggression should be recorded on clinical record. Unfortunately, every act of aggression is not recorded. This may be because (a) of the effort required to complete a form and the fact that (b) many staff accept that aggression is an occupational hazard and not regard it as an untoward incident. Having a dedicated aggression recording system may have the advantage of establishing an accurate record of inpatient aggression for each patient that might assist in the monitoring of change over time. When specific aggression recording instruments are used to record aggressive behaviours, significantly more aggressive incidents are recorded and a more comprehensive picture of aggression is obtained.

The DASA is intended for use on acute psychiatric wards. The only exceptions will be those patients whose admission lasts longer than 3 months where these patients have shown no indication of verbal or physical aggression. In consultation with the clinical team the DASA may be ceased for these patients. Most patients who are aggressive during inpatient treatment will behave aggressively early in their admission, reflecting the strong association between acuity of illness and risk for violence. The DASA may be used on rehabilitation wards when indicated. It may be useful for patients on the rehabilitation wards who are repeatedly aggressive, or who are at risk of severe aggression.

STATEMENT OF THE PROBLEM

"A study to assess the risk of imminent aggression in institutionalized youth offenders using the dynamic appraisal of situational aggression at selected hospitals, Ranchi (Jharkhand)."

OBJECTIVES

- To assess the risk of imminent aggression in institutionalized youth offenders using the dynamic appraisal of situational aggression.
- To examine the predictive validity of an empirically validated measure, designed to appraise the risk of imminent aggression within institutionalized adult psychiatric patients [Dynamic Appraisal of Situational Aggression; DASA], in adolescent male and female offenders.

RESEARCH APPROACH

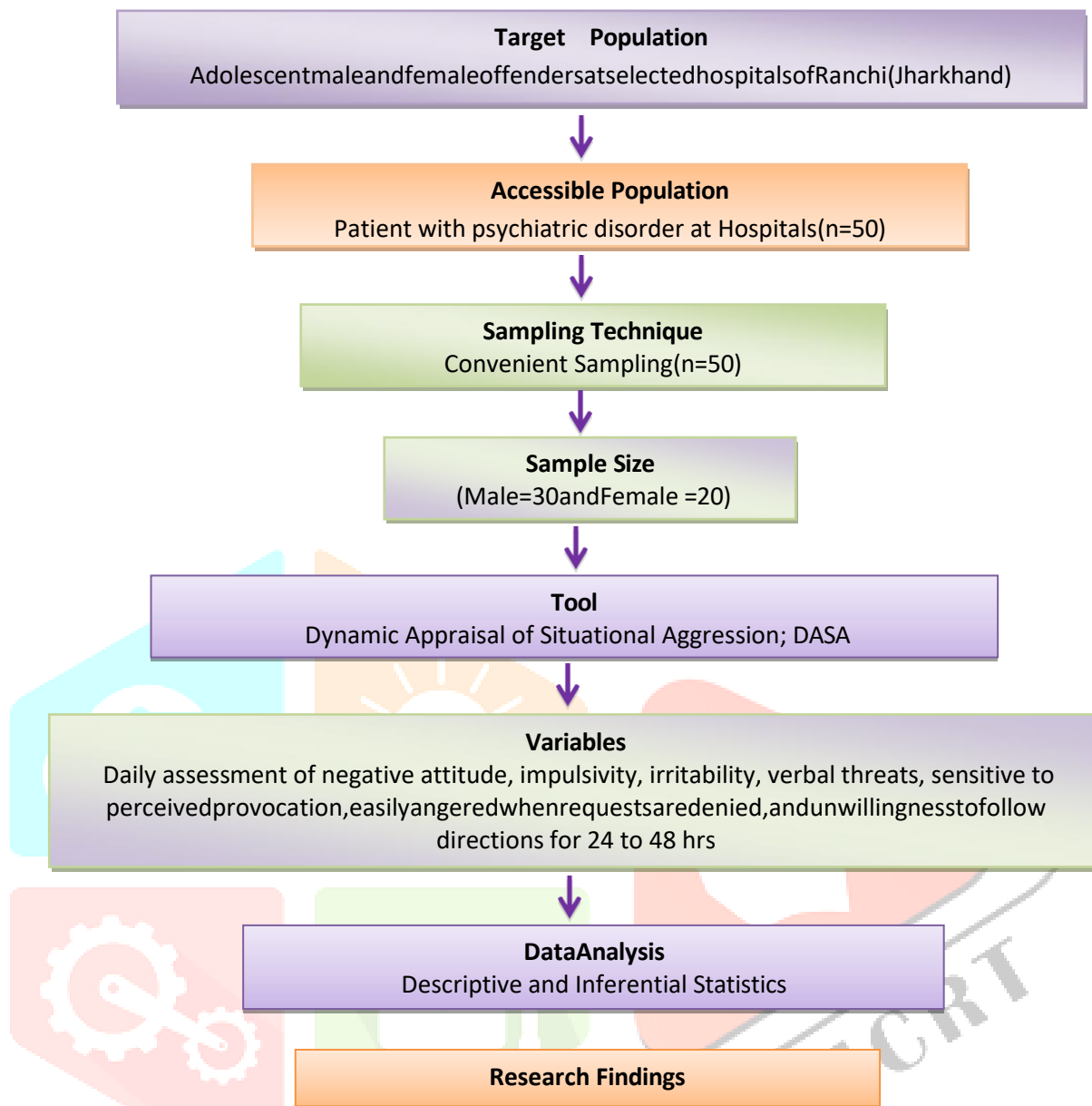
It is the study of events, usually in-depth and holistically, by gathering rich narrative materials and employing an adaptable research design.

The objective of the current research is to assess the risk of imminent aggression in institutionalized youth offenders using the dynamic appraisal of situational aggression. And to examine the predictive validity of an empirically validated measure, designed to appraise the risk of imminent aggression within institutionalized adult psychiatric patients [Dynamic Appraisal of Situational Aggression; DASA], in adolescent male and female offenders. A non-experimental research approach was used.

3.2 RESEARCH DESIGN

It is the description of methods and procedures for gathering the needed knowledge. What information is to be collected from which sources by which procedures is specified in the project's overall operational framework. It was determined that the design was suitable to assess the risk of imminent aggression in institutionalized youth offenders using the dynamic appraisal of situational aggression. And to examine the predictive validity of an empirically validated measure, designed to appraise the risk of imminent aggression within institutionalized adult psychiatric patients [DASA], in adolescent offenders at selected hospitals of Ranchi (Jharkhand).

Diagrammatic Representation of Research Process



SETTING OF THE STUDY

The current research was carried out at psychiatric hospital at Ranchi, Jharkhand has 500 beds for patients with a variety of therapies available in campus.

POPULATION:

TARGET POPULATION

The target group for the current research comprises all Adolescent male and female offenders at selected hospitals of Ranchi (Jharkhand) who have spent at least 48 hours in the Hospitals. The group in the study that the researcher can use to implement their findings is known as the accessible population. The research community is another name for this group, which is a subset of the intended population. 50 Adolescent male and female offenders at selected hospitals of Ranchi (Jharkhand) were chosen, who met the requirements were included in my research group.

3.6 SAMPLE & SAMPLING TECHNIQUE, SAMPLE SIZE:

SAMPLE

Sample is the proportion of a population. The sample of the present study is 50 Adolescent male and female offenders at selected hospitals of Ranchi (Jharkhand).

SAMPLING TECHNIQUE

Among Adolescent male and female offenders a representative group was chosen using non-probability-convenient selection.

SAMPLESIZE

To choose the samples for this research, convenient selection was used. 50 samples were chosen each from the Adolescent male and female offenders at selected hospitals of Ranchi (Jharkhand).

VARIABLES:

Variables are negative attitude, impulsivity, irritability, verbal threats, sensitive to perceived provocation, easily angered when requests are denied, and unwillingness to follow directions.

SAMPLINGCRITERIA:

The following criteria are set for selection of sample

 INCLUSION CRITERIA:

- Patients who are present at the time of data collection
- Patients who are willing to participate in the study. **EXCLUSION CRITERIA:**
- Patients who are not present at the time of data collection.
- Patients who are not willing to participate in the study.
- Patients whose admission lasts longer than 3 months where these patients have shown no indication of verbal or physical aggression.

PILOTSTUDY

A standard scientific instrument for "soft" research is the pilot study, which enables researchers to carry out an initial analysis before committing to a more extensive study or trial.

The pilot study was conducted over period of one week .One group were kept, and to assess the risk of imminent aggression in institutionalized youth offenders using the dynamic appraisal of situational aggression. And to examine the predictive validity of an empirically validated measures, designed to appraise the risk of imminent aggression within institutionalized adults psychiatric patients [Dynamic Appraisal of Situational Aggression; DASA], in adolescent male and female offenders. The study was conducted in psychiatric Hospital from the period of six days .Totally 10 patients with adolescent male and female offenders were selected as samples using convenient sampling technique based on the inclusion and exclusion criteria. The researcher developed rapport with 10 patients. Procedure was done every morning and evening shift with duration of 10 minutes once daily for 6 days. It was intended to assess the study's viability and choose a plan for statistical analysis using Spearman Brown Proficiency; a practical sampling method was applied to the selection of adolescent male and female offenders. Pilot study was conducted from 25.7.2021 to 30.7.2021 at selected hospital Ranchi, (Jharkhand). Following steps were adopted for the study:

Permission was taken from Medical Superintendent 10 subjects were selected by convenient sampling

A tool named Dynamic Appraisal of Situational Aggression; DASA was used.

On an average, time taken by each subjects for completing the questionnaire was 10minutes.

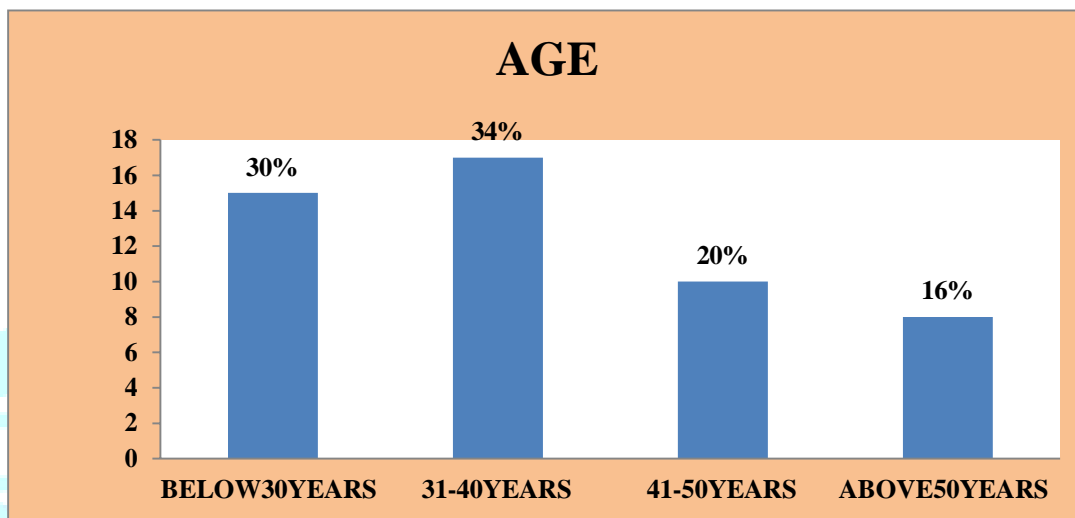
The study was conducted to measure the authenticity of the tool and strength and weakness of the tool. No significant problems were faced during pilot study.

RESULT:

The current analyses used each daily risk assessment rating as a unit of analysis, which is an acceptable and appropriate comparison method in this area of study (e.g. Almvik et al., Citation2000; Barry-Walsh et al., Citation2009; Desmarais, Nicholls, Read, & Brink, Citation2010). The DASA examines dynamic risk states and it is clear that the individuals' mental state fluctuates; therefore the daily ratings are used as separate units of analysis (i.e. each individual clinical state is used to predict the subsequent behavior in the next 24 or 48 hrs).

Percentage distribution of subjects according to Age

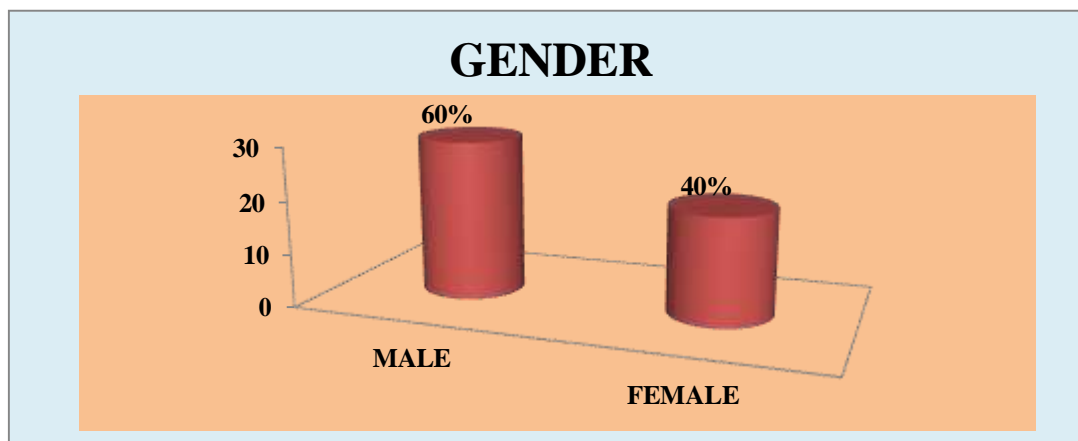
S.NO.	AGE(IN YEARS)	N = 50	
		FREQUENCY(f)	PERCENTAGE (%)
1.	Below30	15	30
2.	31-40	17	34
3.	41-50	10	20
4.	Above50	8	16
	Total	50	100



Clustered column diagram showing the percentage distribution subjects according to age.

Percentage distribution of subjects according to Gender

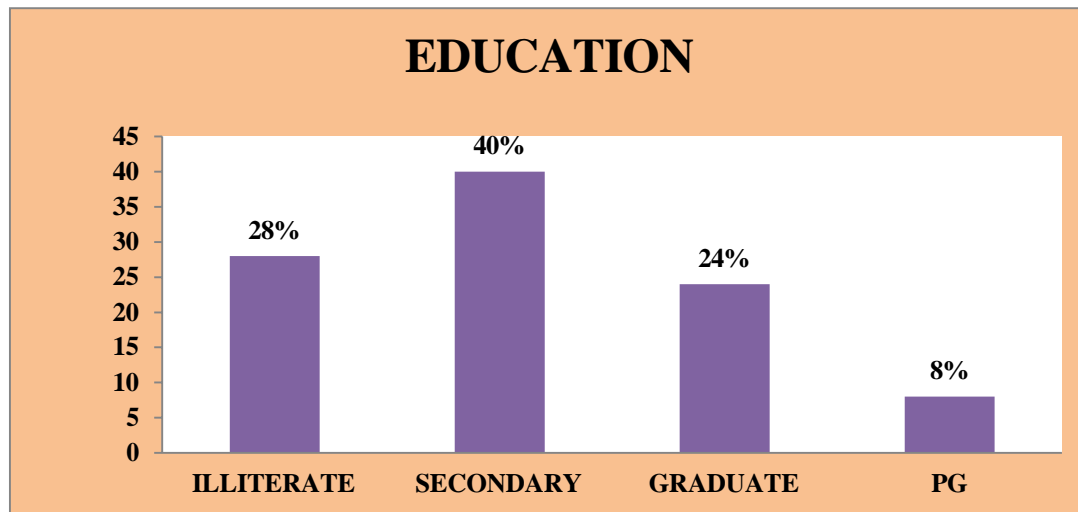
S.NO.	GENDER	N = 50	
		FREQUENCY(f)	PERCENTAGE (%)
1.	Male	30	60
2.	Female	20	40
	Total	50	100



Clustered column diagram showing the percentage distribution of subjects according to Gender.

Percentage distribution of subjects according to Education

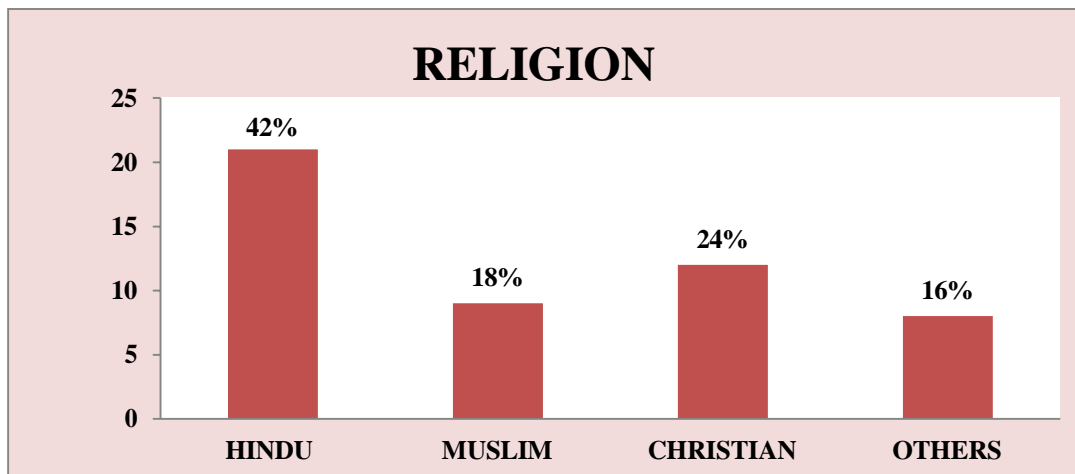
S.NO.	Education	N = 50	
		FREQUENCY(f)	PERCENTAGE (%)
1.	Illiterate	14	28
2.	Secondary	20	40
3.	Graduate	12	24
4.	Post Graduate	4	8
	Total	50	100



Clustered column diagram showing the percentage distribution of subjects according to Education.

Percentage distribution of subjects according to Religion

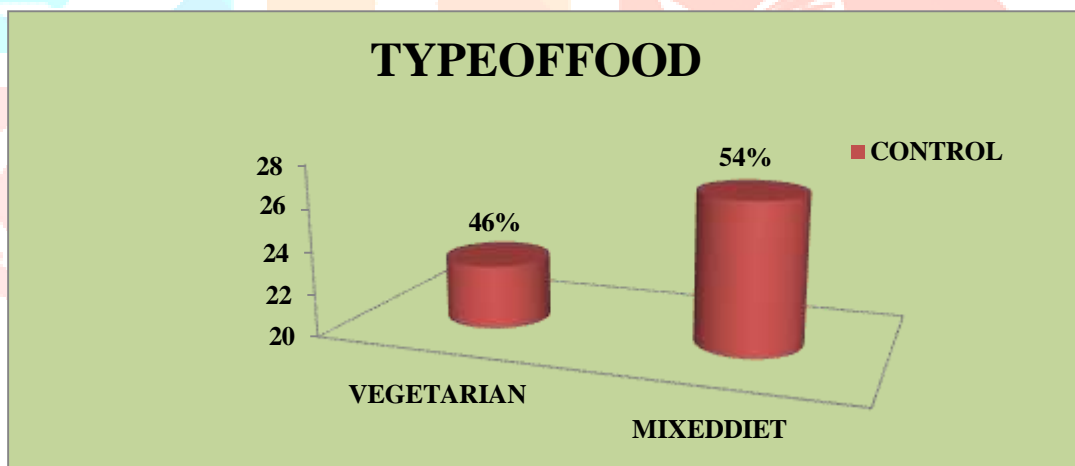
S.NO.	Religion	N = 50	
		FREQUENCY(f)	PERCENTAGE (%)
1.	Hindu	21	42
2.	Muslim	9	18
3.	Christian	12	24
4.	others	8	16
	Total	50	100



Clustered column diagram showing the percentage distribution of subjects according to Religion.

Percentage distribution of subjects according to Type of Food

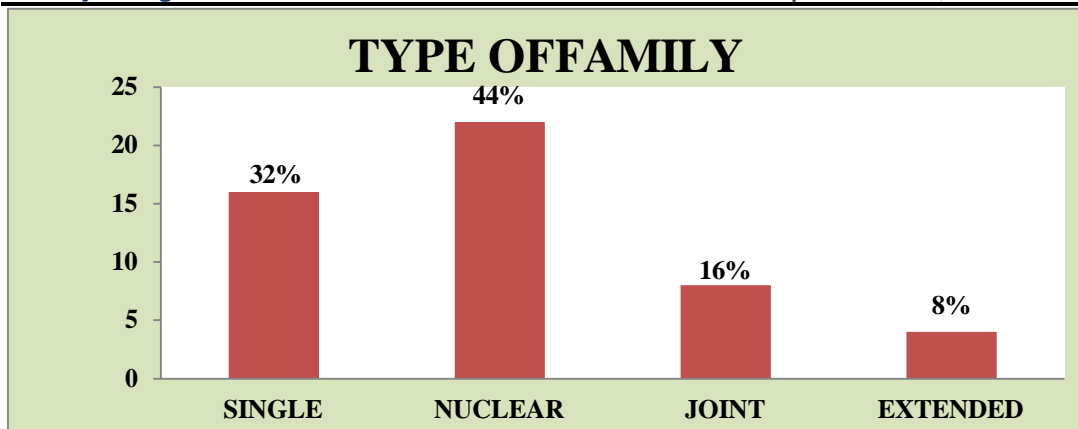
S.NO.	Typeoffood	N = 50	
		FREQUENCY(f)	PERCENTAGE (%)
1.	Vegetarian	23	46
2.	Mixeddiet	27	54
	Total	50	100



Clustered column diagram showing the percentage distribution subjects according to of type of food.

Percentage distribution of subjects according to Type of Family

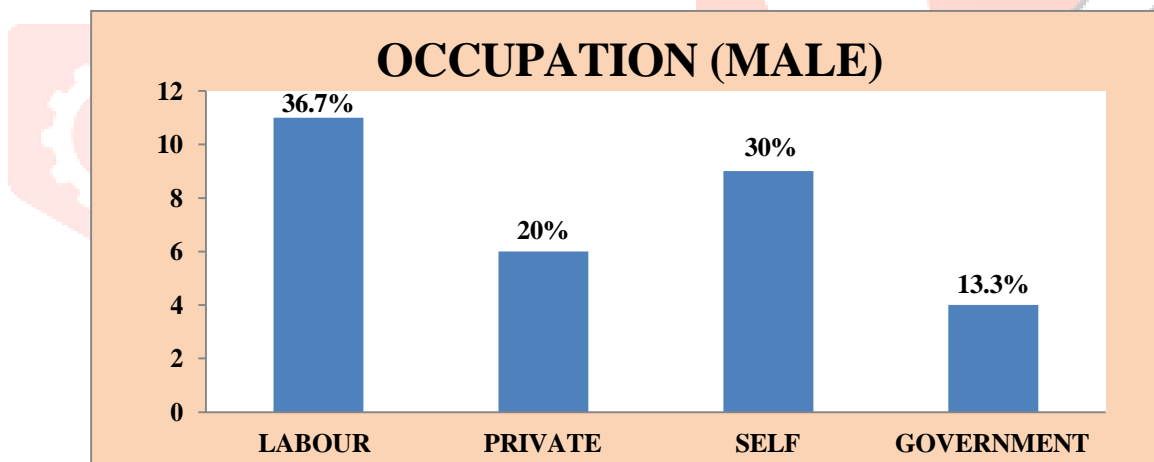
S.NO.	Type of family	N = 50	
		FREQUENCY(f)	PERCENTAGE (%)
1.	Single	16	32
2.	Nuclear	22	44
3.	Joint	8	16
4.	Extended	4	8
	Total	50	100



Clustered column diagram showing the percentage distribution of subjects according to Type of family.

Percentage distribution of subjects according to Occupation(Male)

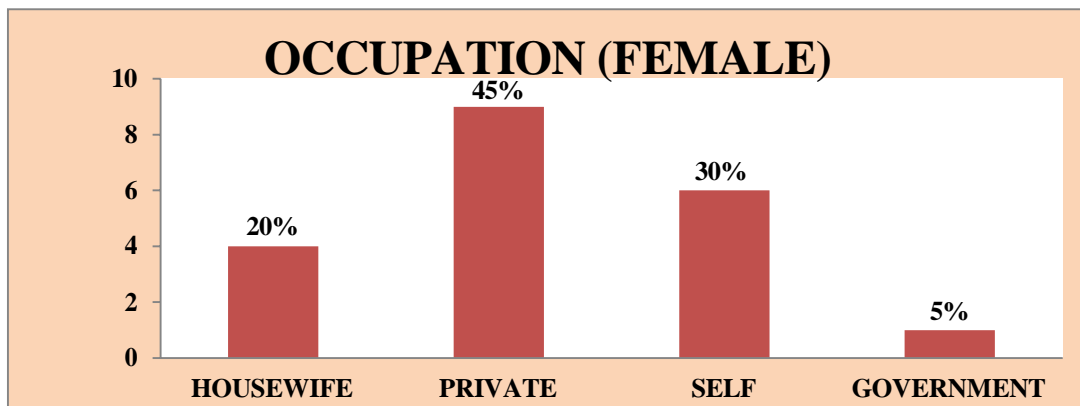
S.NO.	Occupation (Male)	N = 30	
		FREQUENCY(f)	PERCENTAGE (%)
1.	Labour	11	36.7
2.	Private	6	20
3.	Self	9	30
4.	Government	4	13.3
	Total	30	100



Clustered column diagram showing the percentage distribution of subjects according to Occupation (Male)

Percentage distribution of subjects according to Occupation(Female)

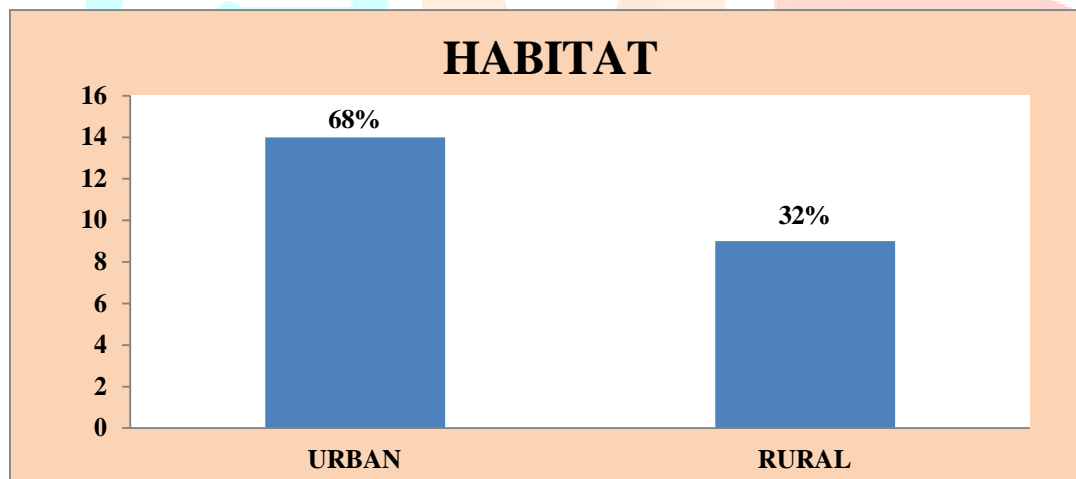
S.NO.	Occupation (female)	N = 20	
		FREQUENCY(f)	PERCENTAGE (%)
1.	Housewife	4	20
2.	Private	9	45
3.	Self	6	30
4.	Government	1	5
	Total	20	100



Clustered column diagram showing the percentage distribution of subjects according to Occupation (Female)

Percentage distribution of subjects according to Habitat

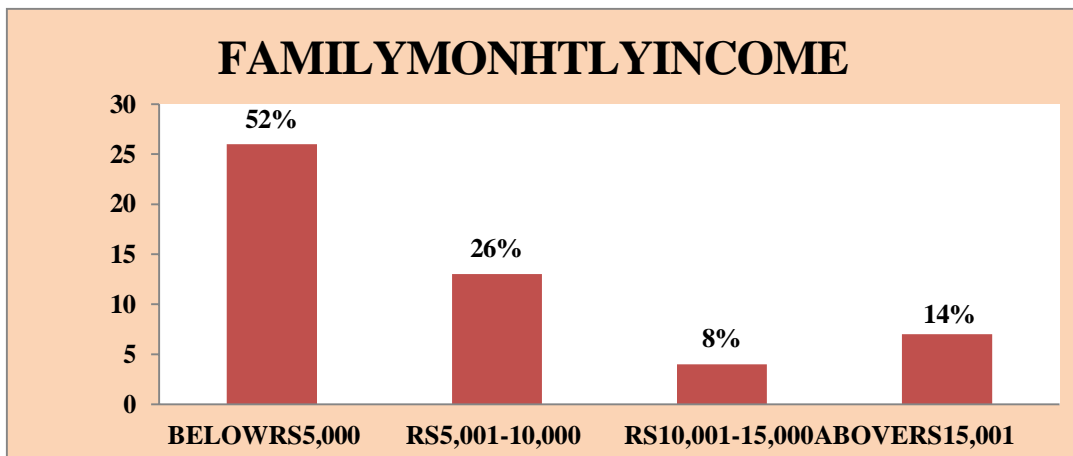
S.NO.	Habitat	N = 50	
		FREQUENCY(f)	PERCENTAGE (%)
1.	Urban	34	68
2.	Rural	16	32
	Total	50	100



Clustered column diagram showing the percentage distribution of subject according toHabitat.

Percentage distribution of subjects according to Family Monthly Income

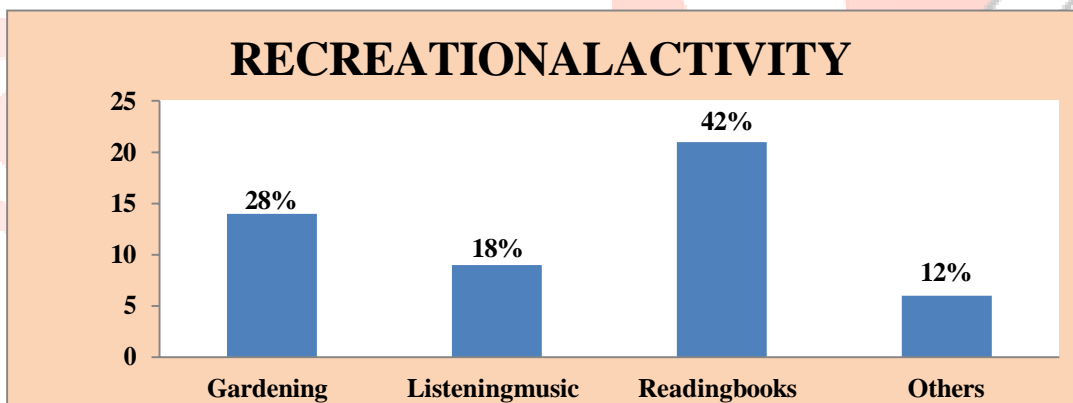
S.NO.	Familymonthlyincome	N = 50	
		FREQUENCY(f)	PERCENTAGE (%)
1.	BelowRs5,000	26	52
2.	Rs5,001-10,000	13	26
3.	Rs10,001-15,000	4	8
4.	AboveRs 15,001	7	14
	Total	50	100



Clustered column diagram showing the percentage distribution of subjects according to Family monthly income.

Percentage distribution of subjects according to Recreational Activity

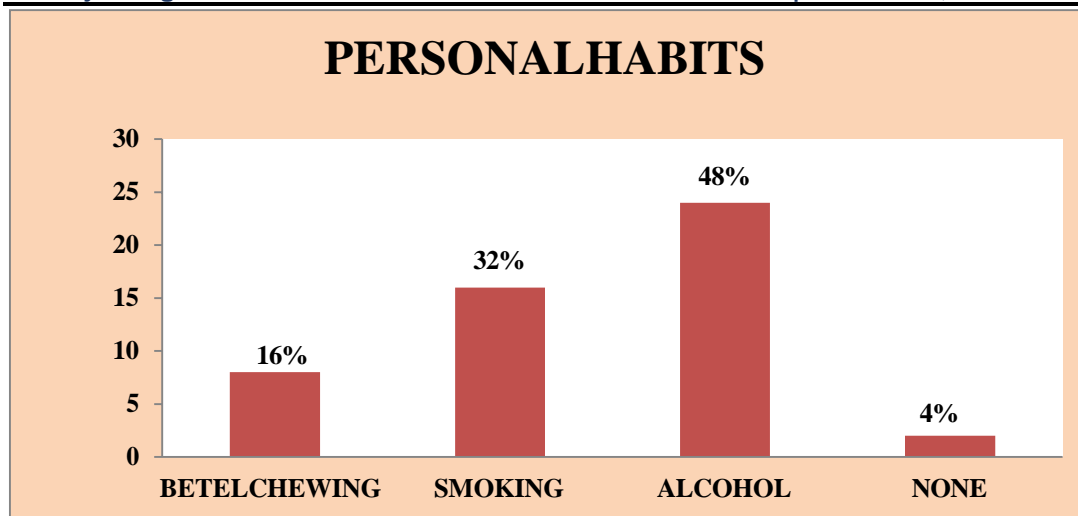
S.NO.	Recreational activity	N = 50	
		FREQUENCY(f)	PERCENTAGE (%)
1.	Gardening	14	28
2.	Listening music	9	18
3.	Reading books	21	42
4.	Others	6	12
	Total	50	100



Clustered column diagram showing the percentage distribution of subjects according to Recreational activity.

Percentage distribution of subjects according to Personal Habits

S.NO.	Personal habits	N = 50	
		FREQUENCY(f)	PERCENTAGE (%)
1.	Betel chewing	8	16
2.	Smoking	16	32
3.	Alcohol	24	48
4.	None	2	4
	Total	50	100



Clustered column diagram showing the percentage distribution of subjects according to Personal habits.

DASARATINGS AND AGGRESSIVE BEHAVIOR

A total of 50 samples DASA risk assessments were completed, and the mean DASA (seven- item) total score was 0.23 (Mdn = 0, SD = 0.95, range = 0–7). The ratings showed skewness; specifically, there were 11 total scores of 0(22%), 4 scores of 1 (8%), 8 scores of 2(16%), 5 scores of 3 (10%), 8 scores of 4 (16%), 4 scores of 5 (8%), 7 scores of 6 (14%), and 3 scores of 7 (6%). There were a total of 50 episodes of aggressive behavior during the follow-up, 26 episodes of interpersonal violence, and 24 episodes of verbal threat. Slightly more than a third of the youth (34%; 17/50) exhibited institutional aggression; 43.3% of the male youth (13/30) were aggressive as compared to 20% (4/20) of the female youth.

Predictive validity of the DASA

Predictive validity of the DASA total score

Logistic regression analyses revealed that the DASA total score significantly predicted any aggressive episode in the next 24hrs (oddratios[OR]=1.29,95% confidence interval [95%CI] =1.07–1.55,p<0.01) and 48hrs (OR=1.34,95%CI=1.16–1.54,p<0.001). The odds ratios suggest that for every one-point increase in DASA total score, there was 1.29 and 1.34 times increased likelihood that the youth would behave aggressively in the following 24 and 48 hrs respectively. The DASA also significantly predicted interpersonal violence in the next 24 hrs (OR=1.33,95%CI=1.06–1.65,p<0.05) and 48hrs (OR=1.31,95%CI=1.09–1.57,p<, and verbal threat in the next 24hrs (OR=1.36,95%CI=1.11–1.67,p<0.01) and 48hrs (OR = 1.39, 95% CI = 1.18–1.63, p < 0.001). Notwithstanding that the DASA total scores significantly predicted institutional aggression in the next 24 and 48 hrs, the ROC analyses indicate that the predictive validity of the DASA total score for institutional aggression was generally poor to (at best) modest (see Table 5.1).

Table5.1. The predictive validity of the DASA total score for institutional aggression.

Type of Institutional Aggression	Entire sample N = 50		Male N = 30		Female N = 20	
	AUC(SE)	95%CI	AUC(SE)	95%CI	AUC(SE)	95%CI
Any aggression						
24 hrs	0.59(0.05)*	0.50,0.69	0.60(0.06)	0.48,0.71	0.57(0.10)	0.38,0.75
48 hrs	0.57(0.06)	0.49,0.64	0.57(0.04)	0.49,0.66	0.51(0.08)	0.36,0.66
Interpersonal violence						
24 hrs	0.58(0.06)	0.46,0.70	0.59(0.07)	0.45,0.72	0.48(0.14)	0.21,0.75
48 hrs	0.55(0.05)	0.45,0.64	0.55(0.05)	0.45,0.65	0.48(0.11)	0.26,0.70
Verbal threat						
24 hrs	0.61(0.06)	0.49,0.73	0.63(0.08)	0.48,0.78	0.58(0.10)	0.38,0.77
48 hrs	0.59(0.05)	0.50,0.69	0.62(0.06)*	0.05,0.73	0.52(0.08)	0.35,0.68

N refers to number of observations.

*p ≤ 0.05.

DASA items that significantly predicted institutional aggression in next 24 hrs.

DASA item(s)	Any aggression		Interpersonal violence		Verbal threat	
	OR	95%CI	OR	95%CI	OR	95%CI
Entire sample						
Negative attitude	4.39*	1.09,17.54	20.39*	1.13,366.52		
Irritability					5.56*	1.20,25.64
Easily angered when Request sare denied	3.88*	1.13,13.16				
Unwillingness to follow directions	29.87*	2.23,400.56				
Male sample						
Unwillingness to follow directions	16.76*	1.19,235,81				
Female sample						
Negative attitude	29.41*	1.54,500			33.33*	1.70,500
Easily angered when Requests are denied	17.24*	1.28,250			19.23*	1.42,250

Note: *p ≤ 0.05.

.DASA itemsthat significantly predicted institutional aggression in next 48 hrs.

DASA item(s)	Any aggression		Inter personal violence		Verbal threat	
	OR	95%CI	OR	95%CI	OR	95%CI
Entire sample						
Negative attitude	3.80*	1.24,12.66	6.17*	1.49,25.64		
Unwillingness to follow directions	5.49*	1.01,29.78				
Male sample						
Negative attitude			5.18*	1.18,22.73		
Impulsivity	4.02*	1.06,15.15				
Irritability					4.48*	1.00,20
Female sample						
Negative attitude	62.50	3.80,1000			76.92**	4.41,1000

Note: *p ≤ 0.05; **p ≤ 0.01.

CONCLUSION

Overall, these findings suggest that the DASA may have some utility for the identification of youth at risk of imminent aggression within institutional settings, though the results are far from compelling as compared with the previous studies on adult populations (Barry-Walsh et al., Citation2009; Daffern & Howells, Citation2007; Ogloff & Daffern, Citation2006). It is evident that a high ratio of supervision staff to residents is important to ensure that the predictive validity (of any risk assessment measure for violence) is acceptable, and the low staff-to-residents ratio in this study may have compromised the predictive validity of the DASA in this study. Nonetheless, the DASA is quick and easy to use. It also has potential to provide staff with some information about each youth's propensity for aggression within the coming 24 hrs, and subsequently allow unit/ward staff to implement biopsychosocial preventive strategies to avert aggression and to make decisions about care and management that are influenced by violence risk state.

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