

# Psychosocial Factors Underlying Sexual Deviance Among Adolescents in ASEAN: a Systematic Review

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## Research Article

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# Abstract

**Background:** Risky sexual behaviours amongst adolescents are associated with detrimental impact on their personal growth, influenced by psychosocial factors including subjective cultural norms. This systematic review aimed to examine the evidence on ASEAN countries' adolescents risky sexual behaviour defined as sexual deviance with its associated psychosocial factors.

**Methods:** A systematic literature review was guided by PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) for a search through four electronic databases for articles published within the time frame of 2010 and 2020 resulting in 20 articles that meet the inclusion criteria.

**Results:** Adolescent sexual deviance in ASEAN is associated with salient psychosocial factors such as cultural norm, self-esteem, parental support/monitoring, substance abuse (alcohol/drugs/smoking), spirituality and religion. Intention, attitude and motivation of sexual transgression appear to be recurrent factors as well. Most studies are cross-sectional and quantitatively designed. The diverse and nuanced psychosocial factors of sexually deviant behaviour affirm the sexual dimension and values of absolutism, hedonism and relativism.

**Conclusions:** Strategies for reducing risky sexual behaviours among ASEAN adolescents should take regard of subjective culture norms and psychosocial needs to achieve the goal of progress as per the ASEAN Youth Development Index. More qualitative and longitudinal approaches in future research are also recommended for more in-depth insights for appropriate intervention or rehabilitative measures.

## Background

Adolescents belong in an uncertain phase of life where biological and psychological changes occur transitioning them from childhood into early youth. The incipience of sexual and reproductive ability places them in a vulnerable position leading them to be involved in transgressions and high-risk sexual behaviours [1, 2]. The World Health Organisation (WHO) defines adolescents in a global age range of 10 - 19 years old and they do not belong in a heterogenous population. Consistently, studies of sexual behaviour indicate salient cultural and social factors that shape sexual behaviour of adolescents in the examination of sexual behaviour among adolescents in the Southeast Asian context [3–6].

As a regional organisation, The Association Southeast Asian Nations (ASEAN) is a culturally, economically and politically diverse group of nation-states that comprise 11 countries namely the Philippines, Vietnam, Thailand, Singapore, Myanmar, Brunei, Cambodia, Timor Leste, Indonesia, Laos, Malaysia. The cases of illegal abortion, pre-marital sex, early sexual debut, teen pregnancy, sexually transmitted diseases such as HIV amongst adolescents are becoming more prevalent in these countries [7–12]. While a number of studies has explained the link between sexual attitudes and sexually risky behaviours with variables such as peer influences, familial and extra-familial influences system, exposure to media containing sexual content, gender scripts, gender equality of a country and social class [7–12], there exists a paucity in a systematic review of psycho-social association with sexual deviance of adolescent within the ASEAN context.

Past systematic reviews have focussed on treatment effects and scale of sexual aggression and protective factors but none on psychosocial determinants or factors that contribute to sexual deviance of adolescents specifically [2–3, 13–15]. This current systematic review intends to elucidates the occurrence of sexual deviance amongst ASEAN adolescents and the psychosocial antecedents that contribute to their intent of deviance through value as source of attitude. Specifically, what are the factors present and the types of deviances. Sexual values are moral guides to make decisions with regard to acceptable or unacceptable sexual behaviour on situational and cultural contexts [16–19]. Thus, this

review intends to provide an insight into how adolescent sexual behaviours are construed as deviant from country to country within ASEAN and the psychosocial factors that contribute to such deviance.

This systematic review anchors on the three dimensions of sexual values which are Absolutism, Relativism and Hedonism [16–19]. Absolutism concerns values based on authoritative power of law, religion and tradition which favours abstinence until marriage. Relativism as the term indicates demonstrates distinct values that are socio-culturally determined. Hedonism ties in with intentions for behaviours that are pleasurable and as respite for sexual behaviours [16–19]. This trinity of dimensions, more notably relativism and hedonism provide us the gradient of nuances which underpins the acts of sexual behaviour of a particular age group (adolescent in this case) as sexual deviance. The dimensions will thus enable the review to answer how sexual deviances amongst adolescents and their associated psychosocial factors by mapping to the sociocultural complexities of ASEAN.

This bears the rationale of ASEAN as a regional choice in this review as it takes into account of the Southeast Asian context of regional belonging with commonality of shared cultural values yet diverse all the same in so far as adolescent sexual offences such as pre-marital sex, sexual violence, homosexuality, transgenderism, inter alia, are concerned. As WHO mentioned, the understanding of motivations behind adolescent sexual behaviours with its associated psychological factors are pertinent in forming educational sex programmes. It is consistent with ASEAN's formation of the Youth Development Index (YDI) to measure its youths progression across critical areas in education and employability as well as youth oriented initiatives as it can aid in overcoming deviant sexual behaviours which otherwise may impede their progression in life and well-being [20, 21].

## **Operationalisation of Sexual Deviance and Psychosocial Factors**

Indonesian Demographic and Health Survey Report (SDKI) defines risky sexual practices as the liberal execution of activities with the encouragement of risky sexual desire, in-tentionally or unintentionally without deference to rules or norms. A continental split between western and eastern blocs gives the relative ideation of how sexual deviance may be construed [22]. While sexual deviance is conventionally defined in terms of paraphilia, zoophilia, voyeurism, exhibitionism, sadomasochism in a global, perhaps western context [23], the definition of sexual deviance may denote other activities beyond just those mentioned. The major distinction can easily be attributed to through cultural norms and values. Chu [24] clarifies that culture and society are determinants of how sexual deviance is construed beyond the consensus of generally accepted sexually deviant's behaviour such as molestation, rape and paraphilia.

In a study of sexual behaviours in Papuan cultures [25], high risk behaviours such as polygyny, promiscuity, early debut, extra marital affairs are evident in spite of normative ideals and consternations of such 'deviant sexuality'. Thus, high risk sexual behaviours can be subsumed under or categorically defined as sexual deviance and the types mentioned are considered deviant behaviours for subsequent review. Further to this operationalisation of sexual deviance, past studies that concern regret and stigma post sexual behaviour are be presuppositions of a sexual deviant behaviour as such concepts renders a good indicator of shame of the personal vis-à-vis the societal management of expected behaviour [19, 26–27]. As per the sexual dimension of relativity, it is prudent to acknowledge however that within member states of ASEAN region, sexual deviance amongst adolescent may occur on a slope of difference with different gradients of contributing psychosocial factors owing to the heterogeneous social variables of religion, spirituality socio-economic status and cultural values.

Psychosocial aspect of behaviourism relates the personal (internal) to the society and culture (external), vice versa. A number of studies [28–33] has ascertained the roles of psychosocial as underlying factors towards deviant behaviour. In fact, a multitude of studies has touched upon psychosocial factors that contribute to the intentions of sexual deviance which in turn demonstrate the correlation of how environmental factors affect sexual deviance amongst individuals.

Such psychosocial factors include, social support, loneliness, marriage status, bereavement, work environment, socioeconomic status and integration [14, 34].

Psychosocial factors as mentioned prior is an interplay between the external and internal, such factors thus and be further defined as having externalisation and internalisation factors respectively. Externalising factors in previous studies have been defined with examples such as sexual violence and aggression as well as substance abuse (drugs and alcohol) while internalising factors were illustrated with mental health such as depression and suicidal thoughts, and self-deprecation [14, 34]. Furthermore, psychosocial factors are seen as vital to human functioning and emergence of disease. This is wholly significant as high-risk sexual behaviours are almost inextricably linked to venereal diseases such as HIV and mental instability such as suicidal ideations. Such factors become especially relevant and significant to review in a continental setting as pre-indicated of the prevalence of sexual deviance in ASEAN. The delineation of psychosocial definition further encapsulates the nuances of diverse psychosocial factors that contribute to the differences of sexually deviant behaviour.

## Method

### Search Strategy

This review is guided by the PRISMA guidelines through the usage of PRISMA flowchart to inform the summary of a systematic search process (Moher et al.) [See Fig. 1] [35]. PRISMA, revised outcome of the Quality of Reporting of Meta-analyses (QUAROM) guideline, which consists a 27-item checklist and flowchart (Moher et al) is appended at the end of the review [35]. Studies that were published from year 2010 to 2020 were included in the review. Electronic databases were used such as ScienceDirect, PubMed, Google Scholar, Emerald Insight and OVID to undertake the literature review. Only search strings in English were used with numerous keywords of (1) 'psychosocial factors' AND 'sexual deviance' OR 'high-risk sexual behaviour'; (2) 'psychosocial factors' AND 'sexual deviance' AND 'adolescents' AND 'Asia' OR 'Southeast Asia'; (3) 'psychosocial factors' AND 'sexual behaviour' AND 'adolescent' OR 'youth' AND 'ASEAN'. A flow chart of the selection of studies is presented in Fig. 1. The initial search and screening resulted in 44 studies that met the inclusion criteria as represented by Fig. 1. After further assessment, 24 articles were removed resulting in a final 20 articles for assessment following the inclusion and exclusion criteria as indicated below:

#### *Inclusion Criteria*

- 1) Articles that pertain to psychosocial factors as independent variable which include externalising and internalising factors.
- 2) Articles that only include respondents or informants or samples within the age range of 10 to 19 apropos the adolescent age bracket defined by the WHO. In the instance of samples that include lower age limit as this review's upper limit (18-19 years old), the article(s) will be accepted with data extraction and inclusion derived from that upper limit sample.
- 3) Participants, subjects, respondents and informants from the Southeast Asian member states. If population sample is transnational, transregional or transcontinental, the article(s) will be accepted with data extraction and inclusion that is ASEAN-specific.
- 4) Empirical quantitative and qualitative data and research modes are accepted or where measures of psychosocial factors of sexual deviance are discussed.

#### *Exclusion Criteria*

- 1) This paper excludes data of psychosocial consequences from sexual deviance. Psychosocial antecedents or determinants towards sexual deviance are the focal point. Article(s) that contributes to psychosocial effects will be rejected.
- 2) Sole mention of sexual deviance activities without mapping psychosocial factors to them are excluded. Additionally, articles that concern protective factors without discussion of psychosocial counterpart will be excluded.
- 3) Sample size that are statistically insignificant (<20%) and age range that is be-low or beyond the adolescent age range will indefinitely be excluded.
- 4) Studies conducted before 2010 and after 2020 will be omitted.

## **Risk of bias**

Risks of bias were consciously sought to be reduced by appointing two researchers to assess articles which are properly framed as sexually deviant by using semantic and pragmatic approximations as indicated in Table [3] in the column of 'Sexual Deviance Indicator'. It incorporates Geoffrey Leech's 'semantic representation and pragmatic in-terpretation' to strictly interpret high-risk sexual behaviour as sexual deviance through textual cues.

## **Results**

### **Synthesis of Findings**

Table 1  
Research Design

Reference	Country	Research Design	Sampling Method	Sample Size
Smith et al. [4]	Indonesia & Thailand (global perspective)	Quantitative Cross-Sectional Study	Standardised 2-stage probability sampling design;  (1) Probability Proportional Selection (Schools)  (2) Random Selection (Classes and Students)	n = 34674 (overall)  n = 5697 (included and reviewed)
Ghani, Kosnin & Aziz [36]	Malaysia	Quantitative Correlational Descriptive Analysis	Random sampling	n=177
Farid et al. [37]	Malaysia	Quantitative Cross-Sectional Study	Systematic selection	n=1082
Simak, Fitriani & Setiawan [44]	Indonesia	Quantitative Cross-Sectional Analytical Observational Analysis	Stratified random sampling	n = 302
Sychareun et al. [50]	Lao PDR	Quantitative Cross-Sectional Descriptive Study	Two-stage systematic random sampling	n = 483
Diarsvitri et al. [25]	Indonesia (West Papua)	Mixed Mode (Quantitative and Qualitative)	Cluster randomised trial (Donner, 1998)	n = 1082 (overall)  n = 721 (15 - 19.2 years old)
Osorio et al. [26]	Philippines	Quantitative Cross-Sectional Survey	Multi-stage sampling of clusters representative	n = 8495 (overall)  n=3016 (Philippine's adolescents)  n=688 (sexually-initiated adolescents) - included and reviewed
Zaw et al. [47]	Myanmar	Quantitative and Qualitative Triangulation, Cross-Sectional Study	Random Sampling	n = 444 (overall)  n = 231 (15 - 19 years old)
Pradubmook-Sherer [49]	Thailand	Quantitative Random Cross-Sectional survey	1) stratified clustered random sampling  2) systematic random cluster sampling  3) simple random sampling	n=1296
Sychareun et al. [48]	Lao PDR	Qualitative Study	Purposive sampling	n = 98
Nawi et al. [38]	Malaysia	Quantitative Cross-Sectional Study	Multi-stage random sampling	n = 306
Susanto et al. [43]	Indonesia	Quantitative Observational Cross-Sectional Study	Multi-stage random sampling	n = 1040

Reference	Country	Research Design	Sampling Method	Sample Size
Chu et al. [24]	Singapore	Quantitative Study	No specification	n = 168
Zeng et al. [51]	Singapore	Quantitative Study	No specification	n = 167
Pengpid & Peltzer [45]	Brunei	Quantitative Cross-Sectional Survey	Two-Stage Cluster Design: (1) Probability Proportional Selection (Schools) (2) Random Selection (Classes and Students)	n = 2596 (overall) n = 1191 (14 & 15 years old)
Suwarni et al. [42]	Indonesia	Quantitative Cross-Sectional Study	Proportionated random sampling	n = 402
Rahman et al. [39]	Malaysia	Quantitative Cross-Sectional Study	Random sampling	n = 1032
Awaluddin et al. [40]	Malaysia	Quantitative Cross-Sectional Study	Random selection through computerised process using Malaysian identity cards	n=21438
Shahrudin et al. [41]	Malaysia	Quantitative Cross-Sectional Study	Purposive sampling	n = 145
Lopez, Mukaire & Mataya [46]	Cambodia	Quantitative Cross-Sectional Survey	Multi-stage sampling	n = 300 (overall) n = 212 (10-19 years old)

Of the 20 articles assessed, six articles were set in Malaysia [36–41], four articles in Indonesia [25, 42–44] and Singapore [24] respectively while Brunei [45], Cambodia [46], the Philippines [26] and Myanmar [47] each scored one. One study [4] was jointly set in both Thailand and Indonesia. 85% of the studies undertook a quantitative approach with 15 studies (75%) conducted cross-sectionally as seen in Table [1]. Two studies (10%) employed the triangulation method (quantitative and qualitative) while only one study was done using a qualitative approach. Since the respondents were adolescents who were mostly schooling, multi-staged random sampling was mostly employed since schools will have to be selected prior to students from classrooms. 95% of the studies focussed on an age range defined as adolescent by the WHO. Nawi et al. [38] however focussed solely on 16-year-old respondents from a population of 15–17-year olds as they were not sitting for major Malaysian national examinations.

75% of studies have included both genders, male and female [4, 25–26, 37–40, 42–43, 44–47, 48–49] while only Sychareun et al. [50] included only female adolescents. The remaining studies (20%) have not specified the respondents' genders as indicated in Table [2]. The articles reviewed show a predominance in respondents belonging in middle or lower socioeconomic household numbering at 11 studies [4, 26, 36, 39–41, 44–45, 47–48, 49] as indicated in Table 2.

In the articles centred in Malaysia [36–41], a majority of the respondents were Malay/Muslim, as were the respondents in Indonesia in Susanto et al. [43]. Studies in Singapore [24, 51] were Chinese and the Thai study of Pradubmook-Sherer's [49] were mostly Buddhists as well as the Cambodian adolescents in Lopez, Mukaire and Matay [46]. Osorio et al's [26] respondents were Christians belonging mainly to the Catholic denomination. 15% of studies [25, 48, 50] focused on specific ethnic groups in Laos and Indonesia respectively as stated in Table [2]. Educational background shows a diverse pattern across the countries ranging from primary grade to high school level as listed in Table [2]. Only Sychareun et al. [48] and Pradubmook-Sherer [49] have reported non-schooling adolescents.

Table 2  
Summary of OCSA typologies and source of data obtained

Reference	Age (Years Old)	Gender	Socioeconomic Status	Race/Religion	Education Background
Smith et al. [4]	12-15	Male and Female	Lower Middle Income	No specification	No specification
Ghani, Kosnin & Aziz [36]	14-16	No specification	Parents Income Estimate  Less than RM 1000 (51.7%)  RM 1001- RM 2000 (19.5%)  RM 2001 - RM 3000 (8.5%)	Islam	Secondary school students
Farid et al. [37]	12 - 19  12-14 (23.8%)  15-17 (64.6%)  18-19 (11.6%)	Male (44.6%)  Female (55.4%)	No specification	Malay (86.9%), Chinese (3.5%), Indian (8.5%), Others (1.1%)  Islam (90.1%), Buddhism (2.1%), Hinduism (5.5%), Christian (1.6%)	(1) Primary (14.6%)  (2) Secondary (82.7%)  (3) Tertiary (0.9%)
Simak, Fitriani & Setiawan [44]	10 - 19  Mean = 13.4  SD = 0.81	Male (54%)  Female (46%)	Parents' Monthly Income  (1) Less than IRP 3, 584 709 (57.6%)  (2) more than IRP 3, 584 709 (42.4%)	No specification	No specification
Sychareun et al. [50]	14 - 19  Mean = 16.4  SD = 1.65	Male (50.7%)  Female (49.3%)	No specification	(1) Lao (2) Khamu (3) Hmong & Yao (4) Akha	(1) Non-schooling (22.2%)  (2) Primary (48.3%)  (3) Secondary (22.6%)
Diarsvitri et al. [25]	15 - 19.2	Male  Female	No specification	(1) Papuan (2) Non-Papuan (3) Mixed	(1) Government  (2) Private  (3) Vocational
Osorio et al. [26]	14 -18	Male (66%)  Female (34%)	(1) Low/Very Low (17.4%)  (2) Middle (78.3%)	(1) Catholic (82.7%)  (2) Evangelic/Protestant (8%)	(1) Public (80.2%)  (2) Private (19.8%)

Reference	Age (Years Old)	Gender	Socioeconomic Status	Race/Religion	Education Background
Zaw et al. [47]	15 - 24 (overall)  15 - 19 (included and reviewed)	Male (51.1%)  Female (48.9%)	Poor	No specification	(1) Low  (2) High
Pradubmook-Sherer [49]	14 -19	Male (45.1%)  Female (54.9%)	Monthly Household Income  Up to 10000 bhatt  10001 - 20000	Buddhist (92.5%)  Christian (1.3%)  Muslim (6.2%)	Out of School (7.8%)  Vocational (44.7%)  High School (47.5%)
Sychareun et al. [48]	12 -19	Female (100%)	Poor	non-Lao-Tai ethnic groups	No specification
Nawi et al. [38]	16	Male (44.1%)  Female (55.9%)	No specification	Malay (77.8%), Chinese (17.6%), Indian (3.6%), Others (1%)  Muslim (77.8%), Buddhist (14.1%), Hindu (3.6%), Christian (4.5%)	Upper Secondary Schooling Students
Susanto et al. [43]	12 - 16  Mean = 13.72  SD = 0.91	Male (44.5%)  Female (55.5%)	No specification	Muslim (100%)	School students
Chu et al. [24]	12 - 18  Mean = 14.9  SD = 1.43	No specification	No specification	Chinese (44.6%)  Malay (40.5%)  Indian (11.9%)  Others (3%)	No specification
Zeng et al. [51]	12 - 18  Mean = 14.9  SD = 1.43	No specification	No specification	Chinese (44.3%)  Malay (40.7%)  Indian (12%)  Others (3%)	No specification
Pengpid & Peltzer [45]	Below 13 to above 16 (overall) - unspecific lower and upper boundary  14 (26.5%) & 15 (22.4%) (included and reviewed)	Male (21%)  Female (24.8%)	"Went Hungry" (as SES proxy)	No specification	No specification
Suwarni et al. [42]	13-15	Male (47%)  Female (53%)	No specification	No specification	No specification

Reference	Age (Years Old)	Gender	Socioeconomic Status	Race/Religion	Education Background
Rahman et al. [39]	13 - 17  Mean = 15 SD = 1.42 13-14 (40.1%) 15-17 (59.9%)	Male (43.5%)  Female (56.5%)	Monthly Household Income  Less than 500 (44.9%)  RM 500 - RM 1000 (26.1%)	Malay (Muslim) (100%)	No specification
Awaluddin et al. [40]	18 - 19	Male (54.5%)  Female (45.5%)	No specification	Malay (66.2%) Chinese (20.7%) Indian (7.2%) Others (5.9%)	Malaysian Curriculum  Primary (2.4%)  Secondary (97.1%)  Tertiary (0.5%)
Shahruddin et al. [41]	14 - 19  Mean = 17.62 SD = 2.36 14-15 (4.1%) 16-17 (81.3%) 18-19 (14.6%)	No specification	Parents Income Estimate  mean = RM 1907.59 SD = RM 2460.68  No Steady Income (13.1%)  RM 100 - RM 1000 (43.0%)  RM 1001 - RM 2000 (14.4%)	Malay (98.6%) Chinese (0.7%) Indian (0.7%)	No education (1.4%)  Malaysian Curriculum Primary (UPSR) (15.9%)  Lower Secondary (PMR/PT3) (42.1%)  Upper Secondary (SPM) (28.3%)
Lopez, Mukaire & Mataya [46]	10 - 24 (overall) 10 - 19 (included and reviewed)	Male and Female	Low	Buddhist and Christian	Cambodian school 3–6 grade level (42.2%)  Lower secondary 7–9 grade level (35.7%)  Secondary 10-12 grade level (22.1%)

65% of the literature reviewed did not specify the sexuality of the participants as indicated in Table [3]. Even though they may be inferred to concern heterosexuals, reducing the risk of bias exercise has hindered this review to make that

inference. Other studies have clearly indicated that their respondents have had sexual relationships with the opposite sex [43, 48–49]. Smith et al [4] cite in the limitation of the study that the heteronormative structure of their study may have held non-hetero adolescents from responding to their questionnaire truthfully with respect to their sexual identity. Diarsvitri et al's [25] study is solely the one that is inclusive of all types of sexuality.

Of the key psychosocial factors concerned, substance abuse appears in a majority of studies [4, 25–26, 37–39, 43, 46, 51]. Self-esteem is also a salient factor studied in Shahrudin et al. [41], Pradubmook-Sherer [49], Osorio et al. [26], Farid et al. [37] and Diarsvitri et al. [25]. Loneliness and Depression as an extension of low self-esteem is reported in Smith et al. [4] and Pengpid and Peltzer [45].

Parental support, attachment and monitoring is another prominent psychosocial feature reported in 20% of the articles [4, 37, 41–42]. Parental as protective factor serves as mediating factor as well as a host to many psychosocial pathway coefficients as in Shahrudin et al. [41] and Suwarni et al. [42]. It is evident from Table [3] that religion has a psychosocial importance towards sexual deviance definition and performance. In Malaysian and Indonesian contexts [36, 39–40, 43–44], spirituality or religiosity, or the dearth of it contribute to sexual deviance amongst Muslim adolescents. Christianity bears a role in Osorio et al. [26] study on Filipino adolescents.

Culture as a psychosocial factor seems to pervade all studies in this review. The studies of Chu et al. [24] and Zeng et al. [51] delineated the parameters of sexual offending factors among Singaporean adolescents within its cultural context despite sharing sexual offences, deviances and misconduct akin to its Western counterparts. Studies as indicated in Table [3] have cited culture as a factor in engendering sexual deviances through normative customs and cultural permissibility or otherwise [42, 46–47, 49, 50]. Sychareun et al. [50] and Susanto et al. [43] in their respective studies in Laos and Indonesia listed sexual behaviour that are culturally specific. Sychareun et al. [50] discusses the prevalence of socio-cultural practices 'Vagina Breakthrough'; 'Welcome Guest'; 'Open Foreskin' where 95% female adolescents experienced 'Vagina Breakthrough' as early as 15 years old or younger, similar to nearly 91% boys who experienced 'Open Foreskin' vis-à-vis a sexual peer norm and culture that condone sexual maturation and activity at a young age. Susanto et al. [43] cites the emergence of pacaran (courtship) and nikah siri (unregistered) among Indonesian adolescent leading to pre-marital sexual activity due to societal norm. Ghani, Kosnin and Aziz [36] assessed sexual deviance from the Islamic vantage point of nafs (temptation/desire).

In terms of sexual deviance, mainly oral sex and sexual intercourse are witnessed. Promiscuity is another dominant deviant behavioural pattern as seen in several studies in Table [3]. In Awaluddin et al. [40] it is explicated that determination of sexual behaviour among Malaysian adolescent was a limitation of the study. Nevertheless, the study showed sexual deviance of masturbation and pornography serving as factors, but they are also coupled with psychosocial factors of anti-social behaviour and low religiosity thus fulfilling the inclusion criteria for this review. Only Chu et al. [24] and Zeng et al. [51] fit into the conventional understanding of sexual deviance since the adolescents in their respective studies were involved in voyeurism, exhibitionism, molestation and rape.

Intentions for sexual activities are determined as deviant much in the way subject of sexual fantasies and fetishes are deemed as deviant. Fantasies and fetishes bear compatibility to terms like 'attitudes', 'intentions', 'willingness' and 'self-motivation' as seen in Shahrudin et al. [41], Suwarni et al. [42], Osorio et al. [26] and Rahman et al. [39]. Shahrudin et al. [41] further expound that adolescent sexual attitude begins with desires for extreme sexual relationship. Table [3] shows that 35% of studies were performed using self-reported or established questionnaires from existing reliable and validated ones to find association between psychosocial factors and sexually deviant behaviours of adolescents. Where qualitative or triangulation methods are concerned, in-depth interviews and focus-group discussion were employed [50]. As self-esteem has been mentioned to be a prominent feature of psychosocial dimension, Rosenberg's Self-Esteem Scale was prominently used in three studies [37, 41, 49]. The measurement of substance abuse has not been measured by a

specific scale but as a subsection of larger surveys as in the case of Lopez Mukaire and Matay [46]. Parental factor was measured using Parent and Peer Attachment Scale and The Parental Monitoring Assessment in Shahrudin et al. [41] and Farid et al. [37] respectively.

Sexual deviance was measured using diverse scales such as Brief Sexual Attitudes Scale, The Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR), Sex Education Inventory, Self-Reported Peer Sexual Norms Questionnaire, Love Style Inventory (LSI) and Sexual Risk Survey. Commonality was not reported in this review.

Table 3  
Sexual Deviance Characteristic

Reference	Sexuality	Sexual Deviance Indicator	Sexual Deviance	Psychosocial Factors	Measurement/Tool
Smith et al. [4]	(1) Heterosexuality (framed)  (2) Non-heterosexuality (potentially)  (3) Non-cisgender (potentially)	relatively weak or immature inhibitory control (pg. 1360); risky sexual behaviour (pg.1360)	Sexual Intercourse	(1) Sedentary Behaviour  (2) Substance Abuse (Alcohol)  (3) Bullying and Victimization  (4) Loneliness  (5) Depression  (6) Parental Support	PACE + Adolescent Physical Activity Measure
Ghani, Kosnin & Aziz [36]	No specification	sexual misconduct; illicit sexual activities (pg. 736)	(1) holding hands  (2) hugging, caressing  (3) oral sex  (4) illicit sex	(1) Romantic Love  (2) Friendship  (2) Ammarah nafs; lawammah nafs; mulhimah nafs	Love Style Inventory (LSI) (Sidek, 1998)
Farid et al. [37]	No specification	sexual risk behaviours (pg. 3)	(1) Promiscuity  (2) High levels of sensation seeking	(1) Self-esteem  (2) Substance Abuse  (3) Family connectedness  (4) Parental Monitoring  (5) Peer Pressure	(1) The Rosenberg Self Esteem (RSE)  (2) The Parental Monitoring Assessment (Li et al. 2000; Small & Kerns 1993)  (3) The Peer Pressure Scale (PPS)
Simak, Fitriani & Setiawan [44]	No specification	Risky sexual practices (pg. 73); deviant behaviour (pg. 74); risky sexual behaviour (pg. 74)	Oral Sex	Spiritual Intelligence	(1) Spiritual intelligence Self-Report Inventory (King, 2008)  (2) Sexual Risk Survey (Turchik & Garske, 2009)

Reference	Sexuality	Sexual Deviance Indicator	Sexual Deviance	Psychosocial Factors	Measurement/Tool
Sychareun et al. [50]	No specification	Involvement in risky sexual practices was found to be higher among youth who have peers who hold permissive sexual norms (pg. 2)	(1) Anal Sex (2) Unprotected Sex (3) Promiscuity (4) Vagina Breakthrough; Welcome Guest; Open Foreskin	(1) Self-efficacy (2) Peer Sexual Norms	(1) Self-efficacy Scale (Anderson & Maughan, 2007; Thato et al., 2005)  (2) Self-Reported Peer Sexual Norms Questionnaire (Sieving et al., 2003; Shafer & Boyer, 1991)
Diarsvitri et al. [25]	(1) Homosexuality (2) Heterosexuality (3) Bisexuality (4) Transgenderism	'deviant sexuality' (pg.1048)	(1) Early Debut (2) Unprotected sex (3) Promiscuity (4) Coercive Sex	(1) Substance Abuse (2) Self-esteem	(1) Pre-intervention self-administered questionnaire (quantitative)  (2) In-depth interviews (qualitative)
Osorio et al. [26]	No specification	regret over sexual experience, because the religions that are prevalent in these countries promote abstinence from sex before marriage (pg. 276)	Sexual relationship	(1) Sexual Arousal (2) Substance Abuse (3) Self-Motivation (was in love and fun) (4) Peer Pressure ( Don't know how to say no) (5) Self Esteem (Want to be popular) (6) Religion	Self-Administered Questionnaire
Zaw et al. [47]	No specification	"Negative norm of pre-marital sex" (pg. 5)	(1) Early debut less than 16 (2) Pre-marital sex (3) Promiscuity (4) Coercive sex	(1) Willingness for sex; (2) Norm of premarital sex (Positive and Negative);	(1) Survey (Quantitative)  (2) Interview (Qualitative)

Reference	Sexuality	Sexual Deviance Indicator	Sexual Deviance	Psychosocial Factors	Measurement/Tool
Pradubmook-Sherer [49]	Heterosexuality	“delinquency to victimization and perpetration of sexual harassment” (pg. 199)  antisocial orientation (pg. 199)	(1) Sexual Agression  (2) Dating Violence	Personal characteristics:  (1) Higher differentiation in gender attitudes and proviolent attitudes,  (2) Higher substance abuse  (3) Anti-social behaviour  (4) Lower self-esteem  (5) Low Grades	(1) Self-reported delinquency behaviour (Sherer, 1990)  (2) Attitudes Toward Dating Violence Scale (Price & Byers, 1999)  (3) Rosenberg’s Self- Esteem Scale (1965, 1979)  (4) Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001)
Sychareun et al. [48]	Heterosexuality	despite the generally liberal attitudes towards pre-marital sex, pregnancy out of marriage was considered taboo (pg. 5)	(1) Pre-marital sex  (2) early marriage  (3) Pregnancy	(1) Liberal attitude  (2) Culture  (3) SES	Thematic Analysis from:  (1) in-depth interviews (IDIs)  (2) focus group discussions (FGDs)
Nawi et al. [38]	No specification	sexual issues being a taboo (pg. 298)  risk-taking behaviours (pg. 299)	(1) Pornography  (2) Pre-marital sex  (3) Pre-sexual activity (kissing and hugging)	(3) Negative/High Risk Behaviours:  (1) Truancy  (2) Bullying  (3) Substance Abuse (Smoking/Drug)	Self-Administered Questionnaire

Reference	Sexuality	Sexual Deviance Indicator	Sexual Deviance	Psychosocial Factors	Measurement/Tool
Susanto et al. [43]	Heterosexuality	certain sensitivities and taboos, exist regarding discussion of sexuality (pg. 2)	(1) Pacaran (Courtship) (2) Nikah Siri (non-registered marriage) (3) Touching (4) Kissing (5) Masturbation	(4) (1) Negative attitudes (5) (2) Types of relationship (6) (3) Substance abuse (Smoking) (7) (4) Spirituality	Self-Administered Questionnaire based on  (1) Illustrative Questionnaire for Interview-Surveys with Young People (WHO)  (2) Pubertal Development Scale (Carskadon & Acebo, 1993)  (3) Emotional Changes of Adolescents survey (Batubara, 2010)  (4) Sex Education Inventory (Bennett & Dickinson, 1998)
Chu et al. [24]	No specification	“deviant thoughts and fantasies” (pg. 153)  “sexual offending” (pg. 153)	(1) penetrative sexual offenses (2) nonpenetrative sexual offenses	(1) Pleasure (2) Relatedness (3) Inner Peace (4) Knowledge (5) Spiritual (0%)	(1) The Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR) (Worling & Curwen, 2001)  (2) Offence Pathways Checklist
Zeng et al. [51]	No specification	youth sexual offending (pg. 480); deviant sexual interest (pg.487)	(1) Molestation; (2) Voyeuristic Offenses (3) Exhibitionism (4) Non-consensual fellatio (5) Rape	(1) Sexual interests, attitudes and behaviours (2) History of Sexual Assaults (3) Psychosocial Functioning (4) Prior and current offences/dispositions (5) Substance Abuse	(1) (ERASOR) (Worling & Curwen, 2001)  (2) The Youth Level of Service/Case Management Inventory 2.0 (YLS)
Pengpid & Peltzer [45]	No specification	risky sexual behaviour practices (pg. 1)	(1) Sexual Intercourse (2) Promiscuity (3) Early Sexual Debut (<14)	(1) Lonely (2) Suicide attempt (3) In physical fight (4) Bullying victimization	(1) Global School-based Student Health Survey (GSHS)  (2) Psychosocial Associations employed Odd Ratios

Reference	Sexuality	Sexual Deviance Indicator	Sexual Deviance	Psychosocial Factors	Measurement/Tool
Suwarni et al. [42]	No specification	Not permissive subjective norm (pg. 213)	Pre-marital sex intentional and behaviour (kissing, necking, petting, oral sex, anal sex, intercourse)	(1) Psychological Behaviour (2) Attitude To Pre-marital Sex (Permissive/Non-Permissive) (3) Subjective Norm (Permissive/Non-Permissive)	(1) Structural Equation Model (Path and Factor Analyses) (2) Questionnaire
Rahman et al. [39]	No specification	“risky attitude” (pg. 2) “immoral” (pg. 7)	Attitude towards pre-marital sex - permissive/non-permissive	(1) Negligence of Religious Practice (2) Substance Abuse (Drugs and Smoking)	Self-administered, anonymous questionnaire
Awaluddin et al. [40]	No specification	high-risk sexual behaviour (pg. 5) anti-social behaviour (pg. 2)	“sexual behaviors cannot be assessed” (pg. 5)	(1) Anti-Social Behaviour (2) Low Religiosity (3) History of Abused (4) Pornographic Viewing (5) Masturbation	Validated, non-anonymous questionnaire routinely used in adolescent health clinics under the Ministry of Health
Shahrudin et al. [41]	Heterosexuality	sexual-risk behaviour (pg. 217) deep feelings and desires about extreme sexual relationship (pg. 217)	Pre-marital sex	(1) Parent-Child Attachment (External) (2) Self Esteem (Internal) (3) Locus of Self Control (Internal)	(1) Parent and Peer Attachment by Armsden, (1987) (2) Rosenberg Self-Esteem Scale by Morris Rosenberg, (1965) (3) Brief Sexual Attitudes Scale by Hendrick, Hendrick, and Reich (2006)
Lopez, Mukaire & Mataya [46]	Heterosexuality	risky behaviours (pg. 1)	(1) Pornography (2) Early Sexual Debut	(1) Culture (2) Substance Abuse (Alcohol)	Survey Questionnaire on alcohol influence and cultural leaning on risky sexual behaviours.

## Discussion Of Main Findings

Cultural norms are the bedrock of psychosocial factors that determine sexual behaviours as deviance. Despite this, there are nuances with which the 20 articles display, as in the case of several studies where such activities are permissible. In effect, it validates the dimension of relativity in the aforementioned sexual values. ASEAN being a religiously diverse and hybrid region casts religiosity and spirituality as determinants to sexual deviance. In fact, deviance is set from the vantage of point religious permissibility. For instance, the studies conducted in Malaysia and Indonesia [36, 40, 43–44]

where Islam is the predominant religion of the respondents; demonstrate deviance as a result of poor religiosity. Religion in these studies is advocated as a protective factor as much as it is a psychosocial determinant. The daily religious observance of five-times-a-day prayer as an obligation is deemed a fortification against deviance [39].

The trajectory of these studies including a Cambodian study by Lopez, Mukaire and Mataya [46], seem to index towards an absolutist dimension of sexual values that places sanctity in deferment in sexual experiences post marriage as per custom and religions. Consistently, in Chu et al. [24] who examined primary human goods as factors to sexual offending among Singaporean individuals found spirituality (0%) to be a non-contributing factor but inner peace (17.3%) was a contributing factor, which incidentally is a desired outcome of spirituality or religiosity.

Additionally, the scope of deviance is presupposed through the concept regret and shame under the purview of religion in a Christian state like the Philippines [26]. Ghani, Kosnin and Aziz [36] study explored this in an Islamic context through the multi-staged concept of 'nafs' or loosely translated to desire. Deviance of illicit sex among Malaysian adolescents was derived from lawwamah-nafs (remorseful desire).

This extricably ties in with self-esteem or the sense of worthiness. Beyond this review, Davis and Miles study unearthed unfavourable negative repercussion among sex workers citing sexual vocations to be 'dirty', and shameful, thus indicating sexual deviance [52]. Remarkably, the review exhibits a full-circle pattern of psychosocial antecedent to a sexual deviant succedent and psychosocial impact through negative appraisals of self-esteem. Parental monitoring appears to be another psychosocial protective factor that positively correlates with sexual deviance amongst adolescence in ASEAN. This may be attributed to the fact that ASEAN member states belong in a collectivistic culture as detected in a majority of the studies reviewed. Interestingly in two studies reviewed [41–42], many psychosocial sub-factors such as self-esteem, attitude and locus of self-control act as pathway coefficients or intermediary factors between parental attachment to adolescents while in Smith et al. [4] parental support serves as one of the psychosocial linking factors between sedentary behaviour and risky sexual behaviour among Thai and Indonesians adolescents. Other mediating factors include substance abuse, parental, loneliness and depressive symptoms manifest in sexual intercourse with a report of sedentary behaviour of 3 hours/day. As such, future research may delve into 'physical activities' as a means towards mitigating psychosocial factors to reduce sexual deviance incidences among adolescents.

However, in Farid et al. [37] study, institutionalised adolescent (female) showed a negative correlation. High family connectedness increased sexually deviant behaviours. This could be attributed to the fact that welfare children's family dynamics differ from those belonging in a stable nuclear family unit. What is psychosocial protective factor for the latter is detrimental factor for the former which may explain their being institutionalised in the first place.

In matters of sexual-orientation based deviances, the limited number of studies displayed in this review prompts for more research focus. Using non-hetero respondents poses a challenge as indicated by Smith et al. [4] a heteronormative setting may result in reticence among them to respond in order to elucidate psychosocial determinants to sexual deviance. Moreover, an examination on sexual minorities would be an interesting insight into the distinction of values between identity and behaviour. Sexual orientation as demographic datum in itself may be seen as sexual deviance in ASEAN member states. This is supported in two contrasting studies found beyond this review where transgenderism and homosexuality have been seen as socially permissible in Thailand [53] as opposed to Vietnam where it is deemed immoral [54].

Substance abuse as an externalising pattern of psychosocial factor appears in a majority of studies [4, 25–6, 37–39, 43, 46, 51]. However, in Rahman et al. study [39], there is not a significant relationship between substance abuse like alcohol among adolescents which could index to its consumption as non-permissible its among Muslim respondents. Lopez Mukaire and Mataya [46] and Pengpid and Peltzer [45] indicated that males were more prone to substance abuse leading

to risky sexual behaviour such as sexual coercion, violence and aggression leading to female sexual victimisation and control [49]. A compounding factor is patriarchy in certain ASEAN member states which permits and justifies men's aggressive behaviour, even to the extent of females being pressured to accept certain deviant behaviours.

Hedonistic dimensions are linked to pleasure seeking and sensory heightening through the influence of substance usage and abuse thereof. Farid et al. [37], Chu et al. [24] and Osorio et al. [26] demonstrate that sexual deviance as sexual satiation and pleasure seeking through alcohol, smoking and illicit drugs were factors towards promiscuity and oral sex. Sexual satisfaction however appears less influential as compared to other factors which make the hedonistic dimension of sexual values, though existing but comparatively benign.

It is evident from the review that a quantitative cross-sectional approach is the dominant mode of study. While quantitative study enables a demonstrable quantification measure of relationship between two distinct variables as parameters, a qualitative approach provides an in-depth probing into sexual deviance factors and intentions which may capture nuances that is hitherto unmeasured in validated questionnaires. As per Sychareun et al. [48] qualitative study, it was determined from first-hand account that pre-marital sex, adolescent marriage and pregnancy were not just the cultural norm in rural Laos, but there was an economic advantage in term of yoking adolescents into agricultural businesses which turns labour into profitable assets.

Research also tends to centre itself amongst the poor. Sexual deviance, though of course impelled by lower socioeconomic standings, would potentially provide a contrasting realm among adolescents who are socioeconomically privileged as their psychosocial needs may differ. The level of digital proficiency, arguably higher among privileged adolescent provide an exposure to other forms of sexual degradations. As per the study in Singapore [24], a higher income country, demonstrates performance of sexual deviance by adolescent sexual offenders similar to those enacted by Western adolescents such as voyeurism and exhibitionism.

In line with western ideation of sexual deviance, as sadomasochism is denoted as deviance that may be consensual, sexual violence however takes place in the ASEAN setting as a coercive, forceful act. The study on dating violence in Thailand shows the cultural norm of permissible male aggression towards female adolescent [49]. Moreover, the synthesis shows gender as a salient demographic data that links psychosocial factors to sexual deviance. Both Farid et al. [37] and Ghani, Kosnin and Aziz [36] cite that female adolescents are more prone to sexual deviance or in the latter's term 'illicit sex' which indicates as active participation in sexual activities. Yet, in Lopez, Mukaire and Mataya [46], boys were more involved in sexually deviant behaviours, much lower than girls which have been purported as embedded double standards in cultural expectations in boys' risqué sexual behaviour.

## **Limitations**

Since the review is done from selected papers within the timeframe of 2010 - 2020, there will be restrictions in existence in reporting the review, bias-free. For instance, the exclusion of several papers from other electronic databases may hamper comprehensiveness of the topic reviewed. While the study of pragmatics by Leech [55] have been utilised to ensure that bias is reduced by interpreting deviance by meaning in context, there is a methodological limitation that required omission of studies. For instance, one of the reasons Boonchooduang et al.'s [56] study was excluded, is because lesbian, gay, bisexual and transsexual adolescents are framed as 'sexual minority youth' and the study did not consider them to be 'sexually deviant' but rather as an integral part of their sexual identity. While this may be seen as the strength for its interpretive rigour, however, it is a missed opportunity to review their psychosocial needs for the purpose of the ASEAN YDI. Another limitation of the present review is the fact that qualitative studies are lower than quantitative studies which impede the capturing of finer nuances of psychosocial motivations and intentions towards sexual deviance. Finally, authors would like emphasised that the detail explanation on absolutism, relativism and hedonism were not included in the review. Besides that, the articles were searched using various terms pertaining to sexual

deviance. As such, those articles may not be collected or measured using the same term (sexual deviance). Despite these limitations, this review has successfully offered some insights regarding psychosocial factors contributing to sexual deviance among adolescents from ASEAN countries.

## Conclusion

We can assign confidence in describing sexual deviance amongst adolescents in ASEAN along with the diverse psychosocial factors as fluid. Just as adolescents are defined to belong in a precarious transitional state, so are the psychosocial factors and their sexual behaviours. Low religiosity, low self-esteem, high substance abuse and minimal parental monitoring are some of the reciprocal factors that abet sexual deviance among adolescents in ASEAN. In terms of sexual deviance, early sexual debut appears to be the dominant act. Sexual deviance in ASEAN appears to be wholly different (pornography, oral sex, dating) from their Western counterparts with the exception of Singapore [24]. This is largely due to cultural norms and how sexual permissibility is regarded.

Fluidity is also cognisable and discernible across the dimensions of absolutism, hedonism and relativism. It is evident from the synthesis of review that the triumvirate of sexual values and dimension holds true with respect to the degrees of differences and nuances. By accounting for this fluidity, sexual and reproductive health strategies for adolescents are recommended to be more inclusive and culturally sensitive to achieve the goal of progress as per the ASEAN YDI.

This review recommends parental monitoring, religion/spirituality and self-esteem building as vital focal areas for policy makers and initiative strategists to consider to curb adolescent sexual deviance in order to achieve the goals of the 'Health and Wellbeing' domain of ASEAN YDI. More research studies are recommended to be conducted in Timor Leste and Vietnam as they were not reviewed in this study. Furthermore, researches pertaining to sexuality and sexual orientation need to be carefully undertaken to ensure the adolescents' psychosocial well-being regardless of their sexualities being deviant by taking into account another dominant psychosocial factor of religion/spirituality present in this review. Future studies in this topic would benefit policymakers, counsellors and researchers alike by opting for a longitudinal approach using qualitative designs as opposed to predominance in cross-sectional mode for an in-depth analysis of sexual deviance and its psychosocial factors among adolescents in ASEAN.

## Declarations

### Ethics approval and consent to participate

Not applicable

### Consent for publication

Not applicable

### Availability of data and materials

All data generated or analysed during this study are included in this published article

### Competing interests

The authors declare that they have no competing interests.

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## Authors' contributions

Conceptualization, original draft preparation and writing, M.R.K (Mohammad Rahim Kamaluddin), (K.C) Karunaagaran Chendirasegaram and F.I (Fauziah Ibrahim).; review and editing B.R (Balan Rathakrishnan), S.S.B.S (Soon Singh Bikar Singh), N.C.M.N (Norruzeyati Che Mohd Nasir), T.E.A.T.M (Tengku Elmi Azlina Tengku Muda), Z.R.H, Zahrotur Rusyda Hinduan, Z.A.R (Zaizul Ab Rahman), L.S.M (Loy See Mey) and I.M.C (Ibrahim Maclean Chong) All authors have read and agreed to the published version of manuscript.

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## Figures

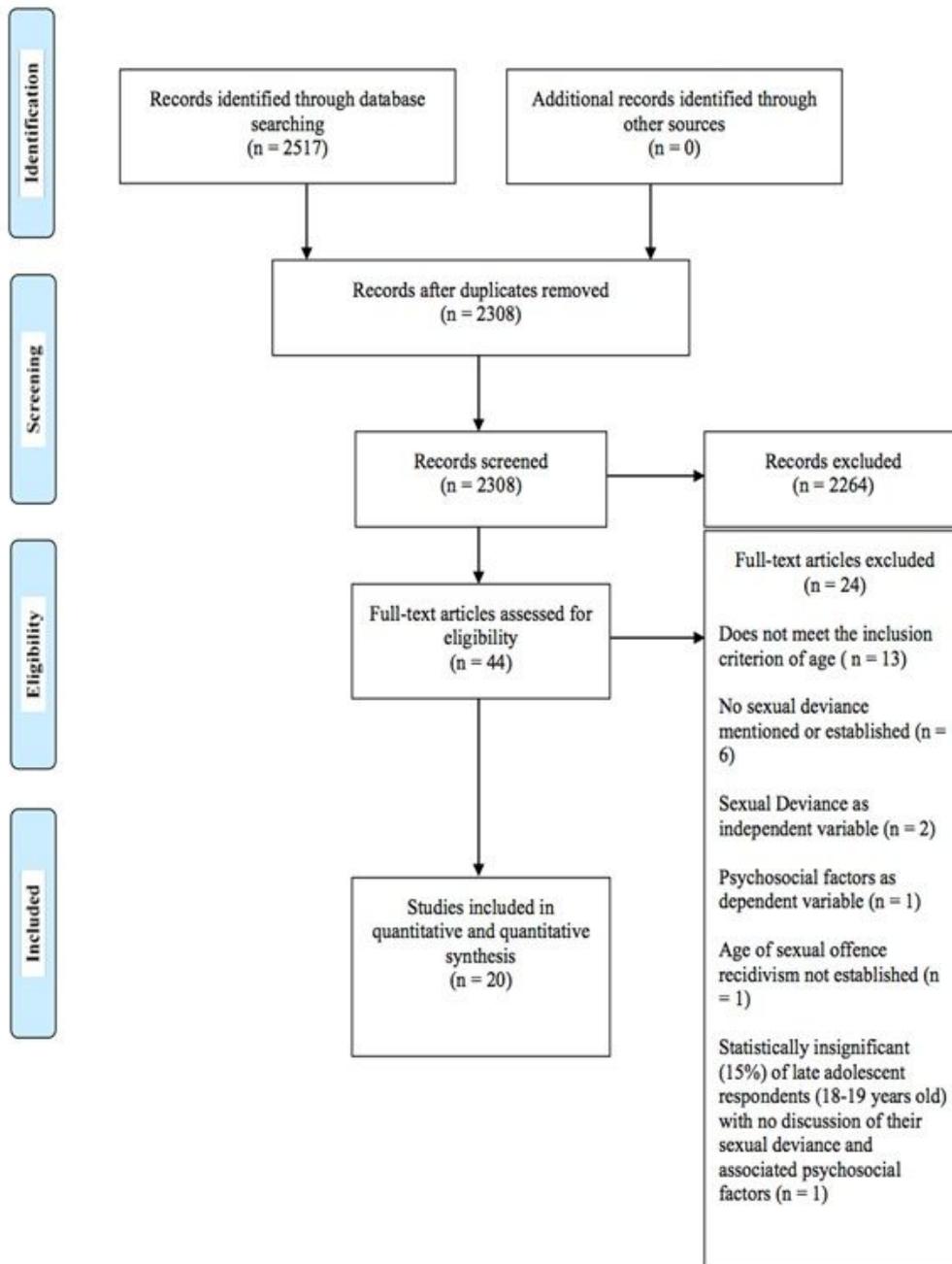


Figure 1

## Systematic review flow chart