

Knowledge and Attitudes on Sexually Transmitted Infections (STIs) and Sexual Risks Among Young Adults

Sharon D. Talahiban
Samar State University
talahibansharon@gmail.com

Date Submitted:
March 28, 2026

Date Accepted:
April 25, 2026

Date Published:
May 19, 2026

DOI:
10.5281/zenodo.20287739

ABSTRACT

Sexually transmitted infections (STIs) remain a major public health concern among young adults, particularly in communities where stigma, limited sexual health education, and uneven access to health services affect prevention and care. This descriptive-correlational study examined the demographic profile, STI knowledge, attitudes toward STIs, and sexual risks of young adults in selected barangays of Calbayog City, Samar, as basis for an evidence-based STI awareness campaign. A total of 385 young adults participated through stratified random sampling. Data were gathered using validated instruments, including a demographic profile form, STI Knowledge Scale, STI Attitude Scale, and Sexual Risk Survey. Frequency, percentage, mean, weighted mean, Spearman's rho, point-biserial correlation, and Cramer's V were used to analyze the data. Findings showed that respondents

were mostly 18 to 19 years old, female, heterosexual, single, from low-income groups, and living in nuclear families. STI knowledge was generally uneven, with only 16.6% demonstrating excellent knowledge, while attitudes were generally positive, with 47.79% classified as positive and 43.64% as very positive. Most respondents were categorized as having minimal sexual risk. Significant relationships were found between profile variables and knowledge and attitudes toward STIs, while sexual risk was significantly associated with STI knowledge but not with attitude. The study concludes that young adults need targeted, culturally responsive, and evidence-based STI education that strengthens knowledge, sustains positive attitudes, and addresses remaining risk behaviors.

Keywords: *sexually transmitted infections; sexual risk; young adults; STI knowledge; sexual health education; awareness campaign*

INTRODUCTION

Sexually transmitted infections (STIs) continue to affect young adults worldwide and remain a persistent public health issue despite improvements in prevention and treatment. International evidence shows that STI prevention depends not only on access to services but also on accurate knowledge, risk perception, and health-protective attitudes among sexually active populations (De Wit et al., 2022). In the Asia-Pacific region, young people encounter barriers such as stigma, limited youth-friendly services, and uneven access to sexual and reproductive health information (Riabroi et al., 2024).

In the Philippines, the rise of HIV and other STI-related concerns among young people has intensified the need for localized prevention strategies. National and regional studies document increasing STI vulnerability among adolescents and young adults, shaped by early sexual debut, limited condom use, cultural discomfort in discussing sexuality, and gaps in sexual health education (Ganguangco & Eustaquio, 2023; Habito et al., 2021). In Eastern Visayas, policy and service barriers further complicate adolescent and youth sexual and reproductive health programming, particularly in underserved areas (Luna et al., 2024). Calbayog City, Samar, provides a relevant setting for investigating STI knowledge, attitudes, and sexual risk because local communities are

influenced by both traditional values and emerging sexual health risks. Although global and national literature emphasizes the importance of comprehensive sexual health education, there remains a need for evidence specific to young adults in Samar. This study therefore examined the knowledge and attitudes of young adults toward STIs, their sexual risk profile, and the relationships between demographic variables and STI-related outcomes as basis for a proposed awareness campaign.

Conceptual Framework

The conceptual framework shows that demographic profile variables influence young adults' level of knowledge and attitudes regarding STIs as well as their sexual risks. These components provide the basis for the proposed awareness campaign.

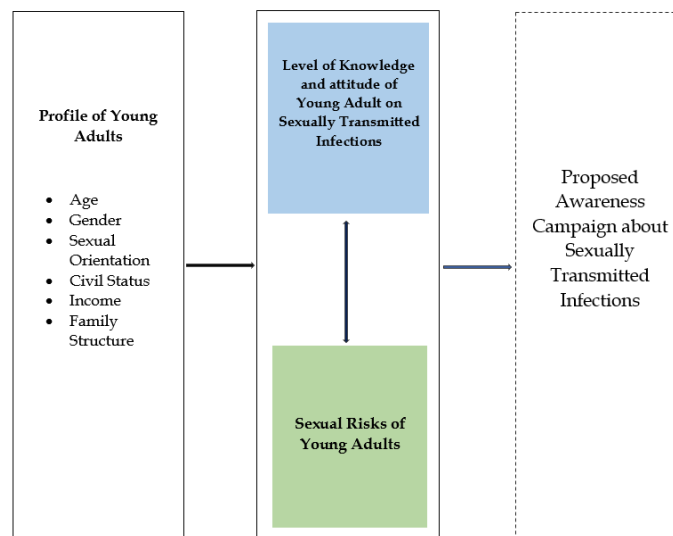


Figure 1. *Conceptual Framework of the Study*

Literature Review

STI Knowledge and Attitudes Among Young Adults

The literature consistently indicates that young adults often possess incomplete knowledge about STI transmission, symptoms, prevention, and treatment. College-based and community-based studies show that knowledge gaps may persist even among educated youth, particularly regarding asymptomatic infection and the correct use of preventive measures (Alves et al., 2022; Ali et al., 2023). A Southeast Asian scoping review similarly reported persistent misconceptions, uneven awareness, and risky behaviors related to STIs across diverse cultural settings (Balakrishnan et al., 2023). Philippine-based studies further show that cultural and religious influences shape sexual health knowledge and attitudes. Adolescents and young adults may express compassionate or generally positive attitudes while still lacking adequate factual knowledge about transmission and prevention (Bautista & Del Pilar, 2023; James et al., 2021). These findings suggest that STI education must address both cognitive and affective dimensions, ensuring that positive attitudes are supported by accurate and practical knowledge.

Theoretical Bases for STI Prevention Behavior

The study was anchored on the Health Belief Model, the Theory of Planned Behavior, and Social Cognitive Theory. The Health Belief Model explains how perceived susceptibility, severity, benefits, barriers, cues to action, and self-efficacy influence protective health behavior, making it relevant for understanding STI

prevention attitudes (Beyazgul et al., 2024). The Theory of Planned Behavior complements this by explaining how attitudes, subjective norms, and perceived behavioral control influence intentions related to testing, condom use, and treatment-seeking (Ajzen, 2020). Social Cognitive Theory highlights the role of observational learning, self-efficacy, and reciprocal interaction between personal and environmental factors in shaping behavior (Schunk & DiBenedetto, 2019). Together, these theories support the need for awareness campaigns that go beyond information dissemination and include risk perception, skills development, social support, and access to youth-responsive services.

Sexual Risk Behaviors and Intervention Needs

Several studies demonstrate that STI knowledge and attitudes are associated with sexual practices, although the relationship is not always linear. Positive attitudes and adequate knowledge may reduce risk, yet other factors such as peer norms, relationship status, access to contraception, and socioeconomic conditions can still influence behavior (Asiah et al., 2021; Helda & Muchlisa, 2021). Filipino youth studies also underscore the importance of social networks and educational attainment in risk reduction (Bello & Calayan, 2020).

Intervention studies suggest that peer-led education, theory-based workshops, and culturally appropriate campaigns can improve STI knowledge and safer-sex attitudes, but improvements in self-efficacy and sustained behavior change require repeated reinforcement and skills-building activities (Akuiyibo et al., 2021; Dowling, 2018). These findings justify the development of a local awareness campaign based on the actual knowledge, attitudes, risks, and demographic characteristics of young adults in Calbayog City.

METHODS

Research Design

This study used a descriptive-correlational research design to describe young adults' demographic profile, STI knowledge, attitudes, and sexual risk behaviors, and to examine significant relationships among these variables. This design was appropriate because it allowed the researcher to describe existing conditions and determine associations without manipulating variables (Miksza et al., 2023; Seeram, 2019).

Research Locale

The study was conducted in selected barangays of Calbayog City, Samar Province, particularly barangays with reported STI cases based on local health information. Calbayog City was selected because of its relevance to youth sexual health concerns and its need for localized, evidence-based STI education interventions.

Participants and Sampling Technique

The respondents were 385 young adults aged 18 to 24 years old from five selected barangays in Calbayog City. Stratified random sampling was used to ensure representation across relevant demographic groups, such as age, gender, civil status, and family structure. This sampling method helped reduce sampling bias and allowed proportional representation of subgroups (Iliyasu & Etikan, 2021).

Table 1. *Respondent Distribution Matrix by Barangay*

Barangay	Number of Respondents
Brgy. San Policarpo	119
Brgy. Capoocan	93
Brgy. Rawis	94
Brgy. Balud	72
Brgy. Obrero	7
	385

Research Instrument

The study used a four-part questionnaire. Part I gathered the demographic profile of respondents. Part II used the STI Knowledge Scale, a 27-item standardized instrument measuring knowledge of HPV, hepatitis, gonorrhea, and chlamydia (Karimi et al., 2021). Part III used the STI Attitude Scale, a 27-item instrument measuring beliefs, feelings, and intentions related to STIs (Beyazgul et al., 2024). Part IV used the Sexual Risk Survey, a 23-item scale that measured sexual risk behaviors during the previous six months (Fino et al., 2021).

Data Gathering Procedure

Data collection began after securing permissions from concerned local officials and barangay authorities. The researcher coordinated with barangay health workers and personally administered questionnaires in private and culturally sensitive settings. Respondents were also given the option to answer through a secure online form. A total of 480 questionnaires were distributed, and 385 were retrieved, yielding an approximate retrieval rate of 80.12%.

Data Analysis

Frequency, percentage, mean, weighted mean, and standard deviation were used for descriptive analysis. Spearman's rho, point-biserial correlation, and Cramer's V were used to test relationships between demographic variables, STI knowledge, attitudes, and sexual risks. The level of significance was set at 0.05, and p-values were interpreted following accepted correlation guidelines (Rohwer, 2022; Schober et al., 2018).

Ethical Consideration

The study followed ethical safeguards due to the sensitive nature of the topic. Ethical clearance was granted with ethics code IHREC: 2025-0021-G. Informed consent was secured, participation was voluntary, responses were anonymized, and questionnaires were administered in private settings. Data were reported only in aggregate form, and respondents were provided with appropriate sexual health information and referral guidance when needed.

RESULTS AND DISCUSSION

Demographic Profile of the Respondents

The respondents were 385 young adults from five barangays in Calbayog City. The largest barangay representation came from Brgy. San Policarpo, followed by Brgy. Rawis and Brgy. Capoocan. Demographically, most respondents were young adults in the early phase of adulthood, predominantly female, heterosexual, single, from low-income households, and living in nuclear family structures. This profile is important because age, gender, civil status, income, and family structure may influence access to STI information, openness to sexual health discussions, and engagement in prevention behaviors.

Table 2. *Demographic Profile of the Young Adult Respondents*

Variables	Frequency (n=385)	Percent
Age		
24 years old	62	16.10
23 years old	23	5.97
22 years old	35	9.09
21 years old	47	12.21
20 years old	28	7.27
19 years old	114	29.61
18 years old	76	19.47
Mean	20.44	
SD	2.12	

Gender		
Female	132	34.29
Male	128	33.25
Prefer not to describe	98	25.45
Non-Binary	27	7.01
Sexual Orientation		
Heterosexual	304	78.96
Homosexual (GayLesbian)	38	9.87
Bisexual	29	7.53
Pansexual	8	2.08
Other	6	1.56
Civil Status		
Single	327	84.94
In a Relationship (Not Cohabiting)	45	11.69
Married	10	2.60
In a Relationship (Cohabiting)	3	0.78
Income		
20,000.00	4	1.04
15,000.00	2	0.52
13,000.00	3	0.78
12,000.00	2	0.52
10,500.00	2	0.52
≤ 10,000.00	48	12.47
None	324	84.16
Family Structure		
Nuclear family (living with parents and siblings only)	298	77.40
Extended family (nuclear plus relatives)	53	13.77
Single-parent family (living with one parent)	19	4.94
Blended family (family with stepparents and/or -siblings)	7	1.8
Living independently from family	6	1.56
Living with live in partner	2	0.52

Knowledge and Attitudes Toward STIs

Results showed that STI knowledge among young adults was varied. Only 16.6% reached the excellent level, while 29.6% had good knowledge, 28.8% had basic knowledge, and 24.9% had poor knowledge. This distribution indicates that more than half of the respondents had only basic to poor knowledge, suggesting the need for intensified and accessible STI education. The finding supports prior research showing that young adults frequently have incomplete or inconsistent STI knowledge despite exposure to general health information (Alves et al., 2022; Balakrishnan et al., 2023).

Table 3. *Level of Knowledge of Young Adults on Sexually Transmitted Infections*

Knowledge Score/Level	Knowledge Score/Level	No. of Young Adults	Percent
21 - 27	Excellent	64	16.6
14 - 20	Good	114	29.6
7 - 13	Basic	111	28.8
0 - 6	Poor	96	24.9
Total		385	100
Mean		13	13
Mean	(Basic)		(Basic)
SD		7	7

In terms of attitudes, most respondents expressed positive or very positive attitudes toward STI-related prevention and health actions. Specifically, 47.79% were classified as positive and 43.64% as very positive, while

only 8.57% were neutral. The mean attitude score was interpreted as positive. This indicates that although knowledge gaps remain, respondents generally hold favorable attitudes toward prevention. However, theory and literature suggest that attitude alone may not always translate into safer behavior unless supported by self-efficacy, access to services, and social support (Ajzen, 2020; Beyazgul et al., 2024).

Table 4. *Attitudes of Young Adults Toward Sexually Transmitted Infections*

Attitude	Frequency (n=385)	Percent
115 – 136 / Very Positive	168	43.64
93 – 114 / Positive	184	47.79
71 – 92 / Neutral	33	8.57
Mean	110 (Positive)	110 (Positive)
SD	13	13

Relationships Between Profile Variables, Knowledge, and Attitudes

Correlation results revealed significant relationships between several demographic variables and STI knowledge and attitudes. Age, gender, sexual orientation, civil status, income, and family structure were significantly associated with STI knowledge. These results indicate that knowledge is socially patterned and may be shaped by demographic characteristics and exposure to information. Similar patterns were noted for attitudes, where gender, sexual orientation, civil status, income, and family structure showed significant associations. The findings reinforce the need for targeted awareness campaigns that respond to the specific demographic characteristics of young adults.

Table 5. *Relationship Between Respondents' Profile Variables and Knowledge and Attitudes Toward STIs*

Profile	Variable	r-value	p-value	Decision	Interpretation
Age1	Knowledge of Sexually Transmitted Infections	-0.204	<.001	Reject H0	Significant
Gender2	Knowledge of Sexually Transmitted Infections	0.37	<.001	Reject H0	Significant
Sexual Orientation2	Knowledge of Sexually Transmitted Infections	0.185	<.001	Reject H0	Significant
Civil Status2	Knowledge of Sexually Transmitted Infections	0.12	<.001	Reject H0	Significant
Income1	Knowledge of Sexually Transmitted Infections	-.094	.066	Fail to reject H0	Not Significant
Family Structure2	Knowledge of Sexually Transmitted Infections	0.136	<.001	Reject H0	Significant
Age1	Attitude towards Sexually Transmitted Infections	-0.248	<.001	Reject H0	Significant
Gender2	Attitude towards Sexually Transmitted Infections	0.392	<.001	Reject H0	Significant
Sexual Orientation2	Attitude towards Sexually Transmitted Infections	0.218	<.001	Reject H0	Significant
Civil Status2	Attitude towards Sexually Transmitted Infections	0.186	<.001	Reject H0	Significant
Income1	Attitude towards Sexually Transmitted Infections	-0.224	<.001	Reject H0	Significant
Family Structure2	Attitude towards Sexually Transmitted Infections	0.316	<.001	Reject H0	Significant
Knowledge on Sexually Transmitted Infections3	Attitude towards Sexually Transmitted Infections	0.238	<.001	Reject H0	Significant

Sexual Risk Profile and Its Relationship with Knowledge and Attitude

The sexual risk profile showed that most respondents were categorized as having minimal risk, with 381 respondents or 99.0% falling under this category, while only 1.0% were categorized as low risk. This may suggest cautious reporting, low declared risk exposure, or possible underreporting due to the sensitivity of the topic. Given the stigma surrounding sexuality in conservative settings, self-reported sexual risk data must be interpreted carefully.

Table 6. *Sexual Risk Level of Young Adult Respondents*

Sexual Risk	Frequency	Percent
Low	4	1.0
Minimal	381	99.0
Total	385	100.0

Further analysis showed that sexual risks had a significant positive relationship with STI knowledge ($r = 0.298, p < .001$), while attitude toward STIs was not significantly related to sexual risks ($r = 0.058, p = 0.267$). The positive relationship between knowledge and sexual risk may mean that young adults with higher exposure to sexual experiences also acquire more STI-related information through direct experience, peer networks, or health encounters. However, the nonsignificant relationship between attitude and sexual risk suggests that positive attitudes alone are insufficient to predict safer behavior. This finding supports the need for awareness campaigns that combine information, skills training, risk assessment, testing referral, and behavior-focused messaging.

Table 7. *Relationship Between Sexual Risks and Knowledge and Attitude Toward STIs*

Parameter	Variable	r-value	p-value	Decision	Interpretation
Sexual Risks	Knowledge on Sexually Transmitted Infections	0.298	<.001	Reject H0	Significant
Sexual Risks	Attitude towards Sexually Transmitted Infections	0.058	0.267	Fail to reject H0	Not Significant

CONCLUSION

The study concludes that young adults in the selected barangays of Calbayog City possess varied levels of STI knowledge, with a considerable proportion demonstrating only basic or poor understanding of STI transmission, prevention, and related health concerns. However, their attitudes toward STIs are generally positive, indicating openness to prevention-oriented messages and sexual health education.

Demographic variables were significantly associated with STI knowledge and attitudes, showing that young adults' sexual health awareness is shaped by social and personal characteristics. Sexual risk was mostly reported as minimal, but its significant relationship with knowledge indicates that STI information may also be influenced by level of exposure to sexual experiences and related health concerns. Overall, the findings support the development of a culturally responsive STI awareness campaign that strengthens knowledge, sustains positive attitudes, and encourages practical prevention behaviors.

Recommendations

- Local health offices and barangay health units should implement a targeted STI awareness campaign for young adults, emphasizing transmission, asymptomatic infections, prevention, testing, and treatment-seeking behaviors.
- Educational institutions and community organizations should provide age-appropriate and culturally sensitive sexual health education that addresses misconceptions while promoting responsible decision-making.

- Awareness activities should be tailored according to demographic characteristics, particularly age, gender, sexual orientation, civil status, income level, and family structure.
- Health providers should strengthen youth-friendly services by ensuring privacy, nonjudgmental communication, accessible testing information, and referral pathways for young adults.
- Future researchers may conduct qualitative or mixed-method studies to explore why positive attitudes do not necessarily translate into lower sexual risk and to validate the proposed awareness campaign through implementation and evaluation.

References

- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. <https://doi.org/10.1002/hbe2.195>
- Akuiyibo, S., Anyanti, J., Idogho, O., Piot, S., Amoo, B., Nwankwo, N., & Anosike, N. (2021). Impact of peer education on sexual health knowledge among adolescents and young persons in two North-Western states of Nigeria. *Reproductive Health*, 18(1). <https://doi.org/10.1186/s12978-021-01251-3>
- Ali, I., Goel, N. K., Sharma, M. K., Rana, K., & Gachuki, J. I. (2023). Knowledge, attitude, and practices regarding sexually transmitted infections among students of Punjab University, Chandigarh. *International Journal of Community Medicine and Public Health*, 10(9), 3317–3323. <https://doi.org/10.18203/2394-6040.ijcmph20232712>
- Alves, R., Precioso, J., & Becoña, E. (2022). Sexual knowledge and attitudes and sexual risk behaviours among college students. *Egitania Scientia*, 83–102. <https://doi.org/10.46691/es.vi.52>
- Asiah, N., Sondi, A. Y., Parlina, N., & Jovanka, D. R. (2021). Attitude and knowledge relationship with sexual behavior at risk of sexually transmitted infection (STI) in male adolescents in Indonesia. *Indonesian Journal of Medical Sciences and Public Health*, 2(1), 13–18.
- Balakrishnan, V., Yong, K. K., Tiong, C. K., Ng, N. J. S., & Ni, Z. (2023). A scoping review of knowledge, awareness, perceptions, attitudes, and risky behaviors of sexually transmitted infections in Southeast Asia. *Healthcare*, 11(8), 1093. <https://doi.org/10.3390/healthcare11081093>
- Bautista, C. A. C., & Del Pilar, V. (2023). Knowledge and attitudes of adolescents about sexually transmitted diseases. *Salud Ciencia y Tecnología*, 3, 344. <https://doi.org/10.56294/saludcyt2023344>
- Bello, N. I. D., & Calayan, P. A. J. (2020). Let's talk about sex: A social network analysis of the Filipino youth's reduction of risky sexual behavior [Undergraduate thesis, University of the Philippines].
- Beyazgul, B., Koruk, F., & Koruk, I. (2024). Development of a scale for attitude toward sexually transmitted infections based on the Health Belief Model. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 298, 42–48. <https://doi.org/10.1016/j.ejogrb.2024.04.036>
- Bugshan, W. M., Qahtani, S. J. A., Alwagdani, N. A., Alharthi, M. S., Alqarni, A. M., Alsuat, H. M., Alqahtani, N. H., Alqahtani, M. R., Alshammari, M. T., Albaqami, R. A., & Almotairi, A. H. (2022). Role of health awareness campaigns in improving public health: A systematic review. *International Journal of Community Medicine and Public Health*, 9(12), 4938–4944.
- De Wit, J. B. F., Adam, P. C. G., Daas, C. D., & Jonas, K. (2022). Sexually transmitted infection prevention behaviours: Health impact, prevalence, correlates, and interventions. *Psychology and Health*, 38(6), 675–700. <https://doi.org/10.1080/08870446.2022.2090560>
- Diaz, A. (2022). PHO-N. Samar intensifies awareness efforts on HIV, AIDS. Philippine Information Agency. <https://mirror.pia.gov.ph/news/2022/06/04/pho-n-samar-intensifies-awareness-efforts-on-hiv-aids>
- Dowling, M. K. (2018). Sexually transmitted infection risk reduction for college students [Doctoral dissertation, California State University].
- Fino, E., Jaspal, R., Lopes, B., Wignall, L., & Bloxson, C. (2021). The Sexual Risk Behaviors Scale (SRBS): Development and validation in a university student sample in the UK. *Evaluation & the Health Professions*, 44(2), 152–160. <https://doi.org/10.1177/01632787211003950>
- Ganguangco, L. M. A., & Eustaquio, P. C. (2023). The state of the HIV epidemic in the Philippines: Progress and challenges in 2023. *Tropical Medicine and Infectious Disease*, 8(5), 258. <https://doi.org/10.3390/tropicalmed8050258>

- Habito, C. M., Morgan, A., & Vaughan, C. (2021). "Direct" and "instant": The role of digital technology and social media in young Filipinos' intimate relationships. *Culture, Health & Sexuality*, 24(5), 657–672. <https://doi.org/10.1080/13691058.2021.1877825>
- Helda, H., & Muchlisa, N. (2021). Attitudes concerning sexual behavior towards risky sexual behavior of sexually transmitted infections among male adolescents in Indonesia. *Kesmas*, 16(2). <https://doi.org/10.21109/kesmas.v16i2.4845>
- Iliyasu, R., & Etikan, I. (2021). Comparison of quota sampling and stratified random sampling. *Biometrics & Biostatistics International Journal*, 10(1), 24–27. <https://doi.org/10.15406/bbij.2021.10.00326>
- James, B. C., Kawano, R., Sunday, E. S., & Chullapant, K. (2021). Knowledge, attitudes, and practices on HIV/AIDS among college students in Pampanga, Philippines. *Acta Medica Philippina*. <https://doi.org/10.47895/amp.vi0.3574>
- Karimi, L., Rahmati, F., & Parandeh, A. (2021). Development and validation of psychometric properties of a questionnaire for sexual health literacy related to HIV/AIDS and sexually transmitted diseases among Iranian young men. *HIV & AIDS Review*, 20(1), 26–32. <https://doi.org/10.5114/hivar.2021.105106>
- Luna, K. L. G. D., Sy, A. D. R., Malimban, R. C., Estadilla, J. O. H., Maglinab, J. M., Ji, H., Jeon, J., & Babasoro, C. M. V. B. (2024). Barriers to the implementation of sexual and reproductive health programs for adolescents in Eastern Visayas, Philippines: A thematic synthesis of national policies using a qualitative study. *Journal of Rural Medicine*, 19(4), 250–263. <https://doi.org/10.2185/jrm.2023-040>
- Miksza, P., Shaw, J. T., Richerme, L. K., Hash, P. M., Hodges, D. A., & Parker, E. C. (2023). Quantitative descriptive and correlational research. In *Music education research* (pp. 241–262). <https://doi.org/10.1093/oso/9780197639757.003.0012>
- Riabroi, W., Gregory, B., Mackay, D., & Germeni, E. (2024). Barriers to young people's use of sexual and reproductive health services in Asia-Pacific. *European Journal of Public Health*, 34(Supplement_3). <https://doi.org/10.1093/eurpub/ckae144.1581>
- Rohwer, D. (2022). Interpreting correlations. In *Routledge eBooks* (pp. 209–229). <https://doi.org/10.4324/9781003057703-14>
- Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia & Analgesia*, 126(5), 1763–1768. <https://doi.org/10.1213/ANE.0000000000002864>
- Schunk, D. H., & DiBenedetto, M. K. (2019). Motivation and social cognitive theory. *Contemporary Educational Psychology*, 60, 101832. <https://doi.org/10.1016/j.cedpsych.2019.101832>
- Seeram, E. (2019). An overview of correlational research. *Radiologic Technology*, 91(2), 176–179.