



Parenting Intervention Method in Improving Parenting Skills as a Reference in Reproductive Health Education in Families

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Authors' contributions

This research has conducted in collaboration between both authors. Author ER designed the studied, performed statistical analyzes, wrote protocols, wrote the first draft of the manuscript, and administered the researched analysis. Authors ER and SI administered literature searches and both authors read and approved the final manuscript.

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ABSTRACT

Background and Objectives: The problem of reproductive health is not limited to adolescents, but it has shifted to early childhood. Parenting skill has an important role in shaping risky sexual behaviours. Some programs in improving communication and parenting self-efficacy are not effective enough to change those risky behaviours in children and adolescents. This study aims to describe the methods of an educational parenting intervention to improve parenting skills as a reference in reproductive health education in the family.

Methodology: The review process did not strictly follow the flow of the systematic review. The data have manually selected through some stages including selection, search, extraction, and analysis. The keyword in data search is a combination of parenting intervention (mother and father), sex education, reproductive health, and community-based programs.

Results: In improving parenting skills some methods used including special education and training

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programs for parents like optimizing the use of internet, photo voice, games, focused group discussion (FGD), and observation.

Conclusions: Structured programs of two-to-three-hour sessions found to be very effective.

Keywords: Reproductive health; sex education; parenting intervention; training programs; systematic literature review.

1. INTRODUCTION

Risky sexual behaviors are somewhat affected by family aspects that encompass the structure, rapport, monitoring, parents' attitude, and values toward sex [1]. Therefore, education on reproductive health that involves parents should be focused on several aspects: parent-child closeness enhancement, policy improvement, child's behavior monitoring, improvement on parents' values toward sex, and motivation for parents to set model behaviors for their children [2]. A parent-based intervention in mothers waiting for their children to undergo a physical checkup in a clinic turned out to be effective in minimizing risky sexual behaviors of secondary school students [3]. Women's experience of sexual harassment or molestation negatively affects the function of parenting; they tend to be more sensitive, pushy, and confused. Nevertheless, it does not impact the efficacy of parenting itself [4].

Research conducted in Bangladesh suggested that in a family where the father is older than the mother and financially secure and the mother takes no part in decision making, she tends to engage herself in her children's lives rather than being with her friends [5]. Meanwhile, research in Beijing suggested that parents define sexual harassment on children differently. They believe that the harassment varies and is affected by a child's gender and communication between parents and children about it. Therefore, parents should play more roles in educating their children in order to avoid them from sexual harassment [6]. Proactive parents are an invaluable asset to their teens' health and security. Frequent meetings and discussions between parents and their children about health contribute to teens' health [7].

Measures in child protection apparently use top-down approaches that push formal services administered by the government. This impact on the low interest of people to use health services provided. Whereas bottom-up approaches require collaboration and non-formal alignment, bigger use of formal services, and are internally motivated by social changes and society's sense of belonging to child-protection programs [8]. The lack of sexual education boys and girls received from formal sector and parents especially took place from 2006-2013 [9]. Programs on parenting skills improvement are believed to be quite effective in changing children's behavior towards risky sexual behaviors [10].

This study aims at figuring out the efficacy of parenting intervention method in improving parenting skills so that parents can refrain their children from risky sexual behaviors.

2. METHODS

2.1 Data Selection

Data selection conducted by focusing on the intervention method used in improving parenting skills since parents are children's first resource of health information. The study conducted should meet some requirements of experimental and quasi-experimental research designs, initial and follow-up data. The outcome measurement is visible through parent and child components.

The data referred to in this study derive from research conducted from 2000 to 2017. The search for key words uses PICO (Population, Intervention, Community, and Outcome) concept. Electronic tracing made possible via Elsevier Science direct, google scholar and PubMed.

Table 1. PICO Components in Article Review

PICO	Key Words
Population	Parent, family, father, mother, teen, adolescent, youth, children
Intervention	Prevention program, sex education, reproductive health
Comparison	Social media, internet, training, workshop,
Outcome	Parent-child communication, parenting skill
Methodology	RCT, experimental, before and after study

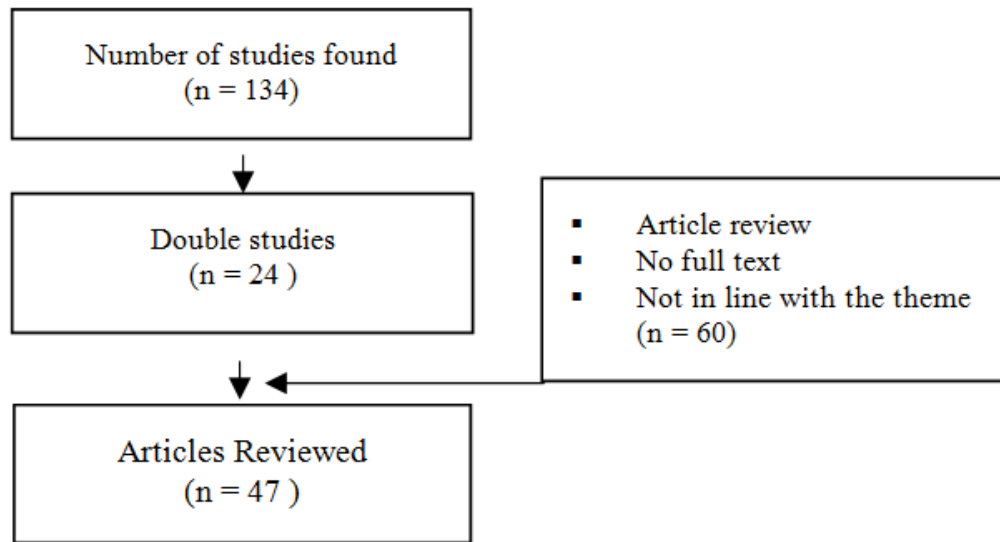


Fig. 1. Data Extraction (Articles relevant to the purpose of research)

2.2 Data Extraction

Articles relevant to research objectives determined by their titles and abstracts. Data are extracted by considering the target population, the intervention forms, the methods used, the outcome on parents, and the evaluation design, for instance, experimental or quasi research, comparison of pre and post-intervention results, duration of follow-ups and outcome measurement, as follow (Fig. 1)

2.3 Data Synthesis

Data synthesis presented in a form of tables that are structured based on the research designs, the number of samples, research setting, and components of intervention methods, parents, and outcome. They analyzed using a narrative systematic literature review that is presenting the results of the research be objectively and theoretically analyzed.

3. RESULTS

The following articles presented several intervention methods for parents as a reference in determining effective methods for selecting effective intervention methods in reproductive health education for their children. There were 14 articles, which present intervention methods for parents, and 31 articles for parents and their children. Several articles aimed to improve

parental knowledge, self-efficacy, and parent-child communication skills.

3.1 Research Design Description

Most parenting interventions use *Randomized Controlled Trial (RCT)* design and experimental research with control groups receiving intervention and not receiving intervention (placebo-controlled study) with post-intervention follow up between 3-24 months.

3.2 Description of Parenting Intervention

Not all parents can effectively educate their children on reproductive health. Some of them still believe that sex and reproductive health is something taboo to discuss. Besides they think that they do not possess sufficient skills to communicate that issue with their children [58,59]. Some intervention programs have addressed to mothers. Teenagers lacking communication with their mothers tended to use less effective contraceptive devices [10]. Likewise, in the USA fathers discussed less sexual issues with their children than mothers do. In terms of facilitating communication on sex issues, fathers tended to show less care. It was indicated by, among others, low self-efficacy and expectation on communicating with their children about sex-related issues [60]. However, research conducted in Kenya indicated the opposite; fathers played pretty essential roles in children's awareness of risky sexual behaviors [61].

Table 2. Summary of article review

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
Feasibility of Internet-based parent training for low-income parents of young[11]	Kohort,4 weeks	9 poor parents, Acquired from 6 Women, Infants, and Children (WIC) centers	Detroit Michigan (United States, Wayne State university clinic	Internet-based web-training 2 weeks and 4 weeks Phase 1: feasibility of internet-based training program. Phase 2: selection of program to use 2-week response 4-week response	Demography; race, education, income information access via internet comfort of using smartphone internet access on parenting programs	2-week-monitor result; 46,1% used website 4-week-monitor result; 69,9% visited online program at least once Only 9% of parents routinely use online programs More than 25% sample did not finished 4-week response
Photo voice: A Strategy to Better Understand the Reproductive and Sexual Health Needs of Young Mothers[12]	Cohort, prospective qualitative community-based participatory 9 step validation	30 poor women aged 15-25, only 9 completed the study	Canada, youth outreach center	Documentary photography FGD 22-month participatory approach 2 groups:	Personal sexual health practices and coping skills, influence of poverty, physical environments, community resources and sexual health services, education, and stigma of pregnancy	Effective Photo voice to analyze perspectives importance of policies and programs supporting empowerment of poor community
The technique of game skills development for parents[13]	Experimental No follow up	40 mothers and students aged 1-3 years	Ural Center for Additional Education in Yekaterinburg School	Game training and game lessons. Interviews, observation and discussion 10 mothers and 2-year kids each, 2 groups: 10 mothers and 3-year kids each	Playing games skill	40% - 45% of remaining mothers can play reproductive games
The effectiveness	Case Control 8	44 controls 54	South Korea	16- session Program	parenting behavior,	Significant improvement on

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
of a parenting education program based on respected[14]	months	cases	School	Parenting Education (the respected parents & respected children)	co-parenting, parenting efficacy, and parenting stress	behavior and SE, and stress reduction on parents Effective as intervention on prevention
The Parent University Program: factors predicting change in responsive social skills training and parent education programs for aggressive preschoolers and their parents in South Korea [15]	Open Trial, Pre – posttest 3 months pre-test–post-test control group design Group 1: 6 Mothers and students taking social skills and parenting training Group 2: 7 Mothers and children as control group and students taking only social skills training Group 3: 6	86 parents of students School 19 Students and their mothers	Southwest Baltimore School in South Korea	5 session-training program 2,5 hours each (program: Parent University Program) Training Program;16-session social skills training 8-session parenting Program	Responsive parenting style amount of facilitator attendance parenting stress parenting sense of competence warmth, rejection, permissiveness	Indicated significant responsive parenting behavior Impacts on children’s aggressive behavior change
Randomized controlled trial of a parenting program to reduce the risk of child maltreatment di South Africa [17]	RCT,	68 poor parents Reference from social organization	South Africa	Training Program 12 weeks 11-phase techniques of behavioral change	Outcome 1: harsh parenting, positive parenting, and child behavior problems. Outcome 2: parent-report assessments of parental depression, parenting stress, and social support.	positive parenting (d= 0.63) parent-child play (d= 0.57) moderate negative treatment effects for less frequent positive child behavior (d=-0.56)

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
A quasi-experimental evaluation of parents as sexual health educators [18]	Cluster RCT Quasi-Experimental 6 months	11 Control schools and 11 case schools	Mexico, School	3-hour workshop:	Parents-children communication in preventing risky sexual behavior	Student 6.8% delayed initiation of sexual intercourse, 14.4% had correct knowledge about emergency contraception (EC), and 164% reported having received condoms from their parents,
A Sex Education Program for Mothers: Effects, Parent Characteristics, and Practice Insights [19]	Quasi-experimental 6 months	9 cases 28 controls	USA	workshop	Characteristics	There is connection between characteristics and program impacts
Partnerships Between Parents and Health Care Professionals to Improve Adolescent Health [20]	Qualitative Study	85 people; paramedics, mother patients, teenagers	North Carolina, clinic	FGD	Parents-children communication	Parents-clinic communication impacts clinic visits to teenagers
Accounting for the impact of parent internalizing symptoms on Parent [21]	Pre – post training	114 mothers and children aged 9-12 years	Toronto, Asylum	Parent training	Parenting efficacy, positive parenting, inconsistent discipline, and poor supervision, mediate the association between parent lifetime internalizing symptoms and post-PT child emotional and behavioral	Positive parenting as connector between parents' time to understand phenomenon and child's emotional and behavioral problems.

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
Effectiveness of a parent-training program in Spain: reducing the Southern European evaluation gap [22]	Quasi experimental: pre-post-follow up test, Follow up 6 months	216 parents having 2-12-year old children	Catalonia, primarily in Barcelona. Education health or social services or socio-educational association	Parenting skill program, 19 weekly sessions of 90 minutes each. Materials: attention, respect, recognition and warmth needs; self-esteem and assertiveness; active listening and empathy; effective communication; problem-solving; negotiation and agreements; everyday family organization and boundaries and norms for children's behavior regulation	difficulties. Social support, parenting skills, parental stress and children's behavior.	76% indicated improvement on parenting skill and 61% social support, 56% indicated less negative behavior on children and 66% indicated less parental stress. Results indicated significant improvement on follow up test. Parents and professionals revealed changes in parenting skills, stress, social support and child behavior after participating in PSP
Integrating intimate partner violence and parenting intervention into [23]	Mix method, quantitative: interview, intervention Qualitative: FGD; needs of home care and responses to intervention	44 fathers	US	Father for change training, 16 weeks	Anger, hostile thinking and emotion regulation problems.	84, 1% participants completed the program and were satisfied with the content.
Introduction to Reproduction: Online Education for the Millennial	Self-report	Millennial learner from 47 countries	Women's Health Research Institute at	Online education; lectures, animation, and 3-D anatomical illustration	knowledge	Proven to impact previous knowledge, reproductive health education and topical mastery

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
Learner [24]			Northwestern University			
“Living Adolescence in Family” parenting program: Adaptation [25]	Pre – post test	cases=438 parents (86% control mothers = 259)	Spain Local social and school center	Intensive training workshop	Parental supervision	Results on respondents from social center vary depending on the profile and facilitators. While results from school center are homogenous.
Parent training in foster families with children with behaviour problems: [26]	Randomized controlled trial 4 –month Follow up. Multilevel analysis	68 parents	Dutch, regional foster care institution	Parent Management Training, 6-9 months	Parenting stress, parenting behavior, child behavior problem, treatment fidelity, parent motivation	Effectively lowers stress, and improves child health behavior
The effect of parental modelling on child Pain [27]	Cohort Self-reported	168 parents and their children aged 6-8 years	Canada, local community	Parent modelling	Parental expression of pain	Parental expression of pain impacted child’s anxiety
Parent-adolescent relationship education (PARE): program delivery to reduce risk of adolescent pregnancy and STDs [28]	Randomized comparison design	192 parents and children	Southeast Texas, school	4 prevention education sessions, 2 booster stage classes for teenagers and parents	Knowledge and skill	Not significantly improved parent-children communication on sexual health parents’ role increased when they get closer to their children self-efficacy increased
Efficacy of a parent-based sexual-risk prevention [29]	RCT, pre-post-follow up test, 6 and 12 months	1115 African-American parents and children aged 9-12	Georgia Atlanta, community-based	1. Communication intervention 5 sessions 2, 5 hours each. 2. Communication intervention 1 session, 2,5 hours . 3. General health, 1 session, 2,5 hours	Self-efficacy	Communication self-efficacy in preventing teenagers’ risky sexual behavior improved

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
Preventing college women's sexual victimization through parent based intervention: a randomized controlled Trial [30], testing the efficacy of a computer-based parent-adolescent sexual communication intervention for Latino parents [31]	RCT, Follow up 1 = 8 months, Follow up 2 = 10 months. RCT, Follow up 3 months	978 Students and their mothers. 130 Latin students and their parents	Erie County, New York, community based Detroit, community based	Handbook on alcoholism on mothers computer based 2 sessions; 40 and 20 minutes	Mother-daughter communication on the content of the handbook Parental self-efficacy in communicating with their children; general communication, communication of sexual behavior, communication comfort	Lowered students' alcohol consumption in the first semester, Computer-based intervention impacted 3 communication components; public, sexual behavior and comfort
The impact of a parent-directed intervention on parent – child communication about tobacco and alcohol [32]	Group randomized Trial,	1.201 parents of 10-11 year-old children from 20 schools	Perth, Western Australia, school	in-home parent-directed drug education intervention	Parents-children communication on smoking and alcoholism	There was communication between parents and children about tobacco and alcohol
A Randomized controlled trial of a parent-cantered intervention in preventing substance use and HIV risk behaviours in Hispanic adolescents [33]	RCT, Follow up 36 months.	128 boys and 138 girls and their parents or families (Family Unidas)		2 modules of PATH (Parent-preadolescent Training for HIV Prevention) 1 year	Parental efficacy in preventing drug abuse and unsafe sex	Improving family ties is more essential than targeting specific behavior; sexual behavior, drug abuse and smoking

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
A Randomized trial of parents who care: effects on key outcomes at 24-month follow-up [34]	RCT, Follow up 24 months	331 parents; 168 European-American and 163 African-American	Seattle, school	7 session preventing program; parenting, youth, and family components designed to prevent drug abuse and behavioral problems	Parental efficacy	African-American tendency to consume alcohol, tobacco and abuse drugs, and/or sexual activities was lower than that of control group.
Randomized trial of parent training to parent adolescent problem behaviour during the high school transition [35]	RCT,	321 parents		Parent Training Program: Common Sense Training (CSP), 6 sessions	Parental interaction: youth school bonding, social skill, behavioral problem	Intervention was not significant.
A parent adolescent intervention to increase sexual risk communication: result of a randomized controlled trial [36]	RCT, pre – post tes, Follow up 6 and 12 months	791 Mexican parents	Mexico, school	6 modules 60 minutes each: small-group discussions, videos, interactive exercises such as role–plays, and skills-building activities	Parental efficacy in communication	Results on intervention group suggested general communication (p < .005), communication on sexual risks (p < .001) and they communicated more comfort than control group did (p < .001).
Timing of parent and child communication about sexuality relative to children's sexual behaviours [37]	Longitudinal study; RCT, Follow up; 3, 6 and 12 months	141 Parents and their children		Module: Talking Parents, Healthy Teens,	Parental Communication Skill	Most parents and children did not discuss sexual problems prior to the children committed sex behavior.
Randomized trial of a parent	RCT, 24- month Follow up	496 parents and teenagers		1 session ImPACT (Informed Parents and	Parental monitoring	ImPACT had no effects on changing perception and

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
intervention; parents can make a difference in long-term adolescent risk behaviors perceptions, and knowledge [38]				Children Together) Program (videotaping & discussion) 4 session Focus on Kids (FOK) 90 minutes each		behaviors
Efficacy of abstinence promotion media messages: findings from an online randomized trial [39]	Online RCT, 4-week and 6-month Follow up	1.969 fathers and mothers		Parents Speak Up National Campaign (PSUNC) messages through media	Parents-children communication about sex	Results of 4-week follow up suggested that fathers discussed sex compared to control group, On month- six follow up, fathers and mothers had communication on sex compared to control group
An evaluation of a mass media campaign to encourage parents of adolescents to talk their children about sex [40]	Survey	1.132 parents of 32 counties	North Carolina	Campaign message: Talk To Your Kids about Sex; TV, radio, billboard	Frequency of message exposure, knowledge about the message and frequency of discussing the message for the last six months, intention and attitude toward the message	There was correlation between media exposure and communicating sex to children ($p < 0,0001$)
Peer mentoring services, opportunities, and outcomes for child welfare families with substance use disorders [41]	Prospective study	783 families	Appalachian, urban and rural community	Peer recovery support services (PRSS) with 28 families as mentors	Family-centered mentor	Mentors in cities differed from those in countrysides. Mentors in country sides reinforced the children more It is higher in SCT group than in LSP group

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
Keepin' it REAL; Results of a Mother– Adolescent HIV Prevention Program [42]	Control group, 2 treatment group (6, 12, 24-month Follow ups	582 mothers and children (aged 11-14 years)	Metro Atlanta, community based	Intervention with social Cognitive Theory & Life Skill Program	Mothers' and children's Self Efficacy in preventing pre-marital sex	Self-efficacy Improved after intervention on mother's knowledge about HIV.
A randomized controlled trial of a telehealth parenting intervention: A mixed-disability trial [43]	RCT, three-Month Follow up	98 parents and disabled children's nurses		Telehealth intervention	Efficacy and parenting practice	On three-month Follow- up, parents' complains on their children's behavior and emotion decreased.
Addressing behavioral impacts of childhood leukemia: A feasibility pilot randomized controlled trial of a group videoconferencing parenting intervention [44]	RCT, 2 group: online intervention and no Follow up for 8 weeks	12 parents of 2-8- year old children receiving acute lymphoblastic leukemia (ALL) care	Melbourne Australia, clinic	Live video conferencing	Feasibility, acceptability, satisfaction of parenting intervention Can it change child's behavior?	Parent-participating level up to eight weeks was low' Parents participating gained high satisfaction, acceptance and feasibility.
Saving Sex For Later: An Evaluation Of a Parent Education Intervention [45]	RCT, three-month follow up	846 families with 4-5 grade children	New York city, school	Saving Sex for Later, a parent education program presented on three audio CDs	Parents-children communication	Parents-children communication on risky sexual behavior was correlated to self-efficacy in discussing puberty and sex. Parents were convinced they could influence their children (odds ratios 1.9–

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
Using Theater Arts to Engage Latino Families in Dialogue about Adolescent Sexual Health: The PATH-AT Program [46]	Quasi experimental follow up: 6, 12, 24 months	Latino	California, school	Promoting Alternatives for Teen Health through Artes Teatro (PATH-AT) program, a peer-led, after-school, abstinence-based education intervention,	Parental participation in PATH program; Let's Talk workshop for 2x 24 hours; consequences of premarital teen sex, parent and adolescent communication, sexual and reproductive health, media pressure, effective conflict resolution, sexually transmitted diseases, and how to raise emotionally healthy children	2.5) 34% parents came to family events 113 came to workshop 559 parents showed up in family theater to their children perform 617 family members attended PATH-AT graduation
Mother's Voice: Culturally Diverse Mothers Experiences Talking with Their Children About HIV /AIDS [47]	Multimethod	121 mothers	New York	Mother's Voice workshop	Knowledge and communication learning	Most mothers benefited from the workshop through the knowledge gained about HIV/IMS and communication
Especially for daughters: parent education to address alcohol and sex-related risk taking among	Randomized field trial	268 families and 6 grade children	New York, school	Especially for daughter Intervention	Self-efficacy and communication	Parents gained more self-efficacy in communicating with their daughters about sex and alcohol

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
urban young adolescent girls [48]						
Feasibility testing a family-level intervention to prevent risky sex intervention to prevent risky sex Latinas [49]	one-group pre-test, post-test 3-month follow up	14 Latin mothers and 15 secondary school students	USA, school	Latina-Girls Empowered through Mind and Mission (L-GEMM) intervention	Mother-adolescent communication	The program was feasible and had impacts
Effect of media message on parent-child sexual communication [50]	Randomized experimental design	394 parents and their children		Message of Parent Speak Up National Campaign	Parents-children communication	Communication took place and children shared their parents' thoughts on sex
Real men: a group-randomized trial of an hiv prevention intervention for adolescent boys [51]	Group Randomized Trial	277 fathers and their sons (11-14 years old)	Metro Atlanta,	REAL men program using social cognitive theory approach	Father-son communication	Fathers participating in intervention discussed more with their sons than those of control group
Increasing parent involvement in youth HIV prevention: a randomized carribien study [52]	RCT	180 parents and their children (12-14 years old)	Trinidad and Tobago in Caribbean	Family HIV workshop	Parenting skill: parental monitoring; educating teenagers on HIV, sex and IMS, and discussing interpersonal and cultural pressure related to sex	Changes took place in intervention group in their knowledge, HIV (d=0.79); attitude _AIDS (d= 0.42); communication with other teenagers (d=0.94); conversation about sex (d =0.95); conversation about risks and values of sex (d=0.43); monitoring

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
Father involvement, dating violence, and sexual risk behaviors among a national sample of adolescent females [53]	Cross sectional	879 teenagers	USA	Recall	Biological father's involvement in risky sexual behavior	(d=0.34); conflicts with other teenagers (d = 0.30); & conflict intensity (d=0.35). Biological father's involvement had a correlation with risky sexual behaviors committed by teenagers who had premarital sex
Mother's effectiveness as hiv risk reduction educator for adolescent daughters [54]	Cross sectional	262 daughters	African-American community-based intervention	Mother/Daughter HIV Risk Reduction intervention (MDRR), trained mothers as HIV educator	Mothers as HIV educator	Mothers effectively enhanced intermediate variables (knowledge about HIV infection, self-efficacy and intention of delaying sex) and lowered teens' sexual activities
Effects of a parent-child communications intervention on young adolescents' risk for early onset of sexual intercourse [55]	Experimental, Pre – post test	351 secondary school students and their parents	New York, school	Parent-child homework assignment	Parent-child communication	Teenager's efficacy in refusing risky sexual behavior increased. Parent-child communication. Intention on delaying premarital sex stretched to senior high school time.
Improving comfort about sex communication between parents and their adolescents:	Pre – post test	6 teenagers (14-18 years old) and their parents	Central Florida, school	Sex Education Program; Psychoeducational Group Format	Sex educator and training as an educator	Fathers demonstrated increasing value after intervention. 25% of those with high pretest score demonstrated lower posttest score.

Article, Author	Design: Length of follow up	Sample size	Location, Setting	Method components: type, duration, phase	Parent component	Outcome
practice-based research within a teen sexuality group [56]						
Intervention induced changes on parenting practices, youth self-pride and sexual norms to reduce HIV-related behaviors among rural African American youths [57]	Cluster randomized trial, long-term follow up	332 families	Southern region, USA	Strong African American Families (SAAF) program	Parental communication and monitoring on teenagers	Intervention affected youths' internal protective processes and positive sexual norms.

3.3 Intervention Methods

Most intervention methods addressed to parents were in forms of education programs with several meeting sessions to improve parenting skills. Parenting training showed significantly positive impacts on children with intellectual limitation [62].

4. DISCUSSION

Preventing risky sexual behaviors was a lot easier to communicate with parents who are sensitive to reproductive health problems their children experience[60]. Teen boys' knowledge, attitude and belief toward risky sexual behavior can be a prediction of their prospective behavior when becoming fathers in the future [61]. Trainings given to parents are effective enough in enhancing parents-children positive interaction and communication. However, it is essential to consistently implement the newly-acquired knowledge on parenting skills [62]. In addition, there is a change in parents' attitude towards sexual education [63].

4.1 Target Population

Most of the interventions aimed at parents both mothers and fathers. Mothers used the context of their close relationships with their children to take a proactive stance. The everyday care routines related to parenting, for example, bath time, provided opportunities and contexts in which discussions could occur. The parent-child communication about sexual topics, in general, suggests close parent-child relationships can foster higher quality and repeated discussions [64]. Father also needs education and skills development in sexual health communication[65]. Besides parents, intervention is also in children, through measuring parent-to-child intervention both their son and daughter. Even though findings suggested that parents communicate different amounts and about different sexuality topics with sons and daughters[40]. In order to compare the result before and after the intervention, pre-test and post-test were used to measure the improvement[53,5]2. A follow-up test also enables to assess whether the program has sustained effects on participants[43,47,66].

4.2 Intervention Method

We found that the intervention methods used included face-to-face work in the form of

workshops and trainings. Some things that need considered in face-to-face sessions are the need for large funds, clear manual procedures, training of facilitators to ensure that programs have carried out correctly, the need for planning and coordination in the community, which is tiring. In addition, interventions that require participants in multiple sessions often face recruitment and retention problems[67]. By the clear need for more accessible treatment options and to overcome the problem of attendance of participants, an online intervention was also an alternative method of intervention, especially for parents who have internet access. Online parenting intervention gave the real helping by providing 'anytime, anywhere' assistance to a parent who has internet access, predicated upon a basic level of internet knowledge and expertise[68]. The research with two randomized controlled trials has indicated that these programs produce lasting improvements in child behavior and parenting skills and confidence when delivered with[69] and without[70] professional contact. The use of internet as communication media[71] in parenting intervention is put into consideration as it is inexpensive, user-friendly, accessible and less stigmatizing[72]. Some parents from lower social economy class understood that they could refer to the Internet to provide them some information on child reproductive health[73]. Positive results were found on teenagers and parents who made use of the Internet-based programs[74]. Children whose parents received the Internet-based intervention were reported to demonstrate less problems compared to those whose parents did not[75]. Apparently, interventions promoted not only parents' awareness but also parents' skill in playing games. Games could significantly boost child's development.

4.3 Parent-Child Relation

Parenting have known closely related to many aspects of child and adolescent development. Parents have a big role in sexual education for children and adolescents. They are a powerful source of information and socialization in influencing the sexual attitudes, decision making and behavior of young people[76]. Parents' behavior has a crucial role in defining what is normal or good for their children. Risky parental behavior is associated with risky sexual behavior their children and adolescent[77]. The effectiveness of an intervention can be seen by measuring the success of parent-child relationships, for example parent-child

communication[46–49,54]. Parental trust is known to be a very strong influence on adolescent behavior and to be protective against risky behavior both sexual activity and substance use[78]. The parental expectation also associate with the postponement of sexual activity[79]. The efficacy of parents also affects parent-child communication skills. Behavioral self-efficacy was the best predictor of mothers' discipline style. It supported the importance of developing parenting strategies to generalize their parenting skills to a diverse range of diverse parenting contexts both in the home and in the community[80].

5. CONCLUSION

Our reviews provide preliminary support for the effectiveness of the method for reference parent-based interventions on parent-child reproductive health. There is no such best method. The selection of intervention methods needs careful thought since they have different impacts on parents and children from their point of view. The effective method should be participating in training followed by post-intervention evaluation. The combination of interactive methods are possible as long as they are clearly graded and structured.

DATA AVAILABILITY

All relevant data is in the paper and its supporting information files on the article. This study will help researchers to uncover critical areas of parenting intervention education methods to improve parenting skills as a reference in reproductive health education in families. This study is expected to be the basis of parenting skills in shaping risky sexual behavior by increasing communication and parenting self-efficacy so that it can help change risky sexual behavior in children and adolescents.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

All Authors have declared that no competing interests exist.

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